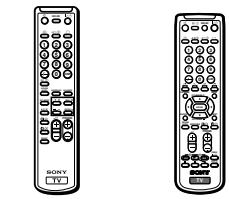
Self Diagnosis Supported model

SERVICE MANUAL

AG-3E CHASSIS

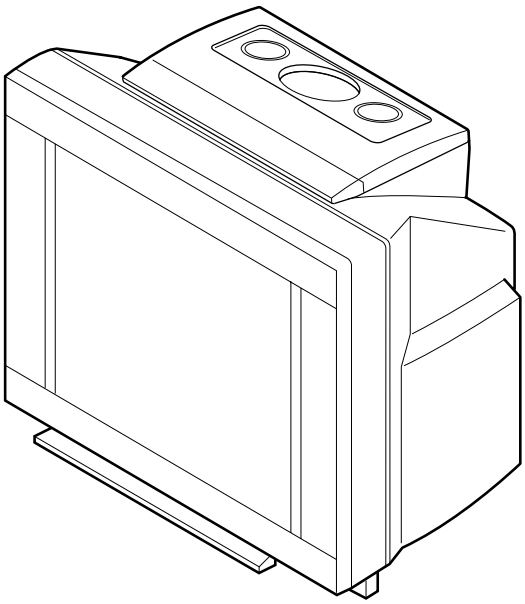
MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-EX29M93	RM-964	Hong Kong	SCC-U40A-A
KV-EX29M39	RM-963	OCE	SCC-U41B-A
KV-EX29M65	RM-964	Malaysia	SCC-U42B-A
KV-EX29M87	RM-963	ME	SCC-U43A-A
KV-EX34M97	RM-963	Hong Kong	SCC-U40B-A

MODEL	COMMANDER	DEST.	CHASSIS NO.



RM-964

RM-963



TRINITRON® COLOR TV

SONY®

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SPECIFICATIONS
(KV-EX29M65/EX29M93)

		Note
Power requirements	220-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	B/G, I, D/K, M	
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I, D/K; A2 Stereo/Bilingual B/G	
Teletext Language	English, Arabic, French	KV-EX29M65 only
Channel coverage		
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41	
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: S01 to S03, S1 to S41, Z1 to Z39	
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84	
(Antenna)	75-ohm external terminal	
Audio output (Speaker)	6W + 6W	
3D WOOFER	15W	
Number of terminal		
(Video)	Input: 4 Output: 1	Phono jacks; 1 V_{P-P}, 75 ohms
♪ (Audio)	Input: 4 Output: 1	Phono jacks; 500 mVrms
(S Video)	Input: 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1	Phono jacks Y : 1 Vp-p, 75 ohms, sync negative C_B : 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms
(Headphones)	Output: 1	Stereo minijack
Picture tube	29 inch	
Tube size (cm)	72	Measured diagonally
Screen size (cm)	68	Measured diagonally
Dimension (w/h/d, mm)	722 x 603 x 516	
Mass (kg)	56	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SPECIFICATIONS
(KV-EX29M39/EX29M87/EX34M97)

			Note
Power requirements	110-240 V AC, 50/60 Hz		ME only
	220-240 V AC,50/60 Hz		OCE/Hong Kong only
Power consumption (W)	Indicated on the rear of the TV		
Television system	B/G, I, D/K, M		
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58		
Stereo/Bilingual system	NICAM Stereo/Bilingual B/G, I, D/K; A2 Stereo/Bilingual B/G		KV-EX29M39, EX29M97 only
Teletext Language	English, Arabic, French		KV-EX29M39 only
Channel coverage			
B/G	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41		
	VHF: 0 to E12,5A,9A / UHF: 28 to 69 / CATV: S01 to S03, S1 to S41		
	VHF: 1 to 11 / UHF: 21 to 69 / CATV: S01 to S03, S1 to S41		
I	UHF: B21 to B68 / CATV: S01 to S03, S1 to S41		
D/K	VHF: C1 to C12, R1 to R12 / UHF: C13 to C57, R21 to R60 CATV: S01 to S03, S1 to S41, Z1 to Z39		
M	VHF: A2 to A13 / UHF: A14 to A79 / CATV: A-8 to A-2, A to W+4, W+6 to W+84		
┐┌ (Antenna)	75-ohm external terminal		
Audio output (Speaker)	6W + 6W		
3D WOOFER	15W		
Number of terminal			
(Video)	Input: 4 Output: 1		Phono jacks; 1 V_{P-P}, 75 ohms
♪ (Audio)	Input: 4 Output: 1		Phono jacks; 500 mVrms
(S Video)	Input: 2		Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
(Component Video)	Input: 1		Phono jacks Y : 1 Vp-p, 75 ohms, sync negative C_B : 0.7 Vp-p, 75 ohms C_R : 0.7 Vp-p, 75 ohms Audio : 500 mVrms
(Headphones)	Output: 1		Stereo minijack
Picture tube	29 inch	34 inch	
Tube size (cm)	72	86	Measured diagonally
Screen size (cm)	68	80	Measured diagonally
Dimension (w/h/d, mm)	722 x 603 x 516	895 x 700 x 590	
Mass (kg)	56	84	

Design and specifications are subject to change without notice.

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER lamp will automatically begin to flash.
The number of times the lamp flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER lamp flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

1. DIAGNOSTIC TEST INDICATORS

When an error occurs, the STANDBY/TIMER lamp will flash a number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

Result for all of the following diagnostic items are displayed on screen. No error has occured if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/Diagnostic result	Probable Cause Location	Detected Symptoms
• Power does not turn on	Does not light	—	• Power cord is not plugged in. • Fuse is burned out F1601 (F1 Board)	• Power does not come on. • No power is supplied to the TV. • AC power supply is faulty.
• +B overcurrent (OCP)	2 times	002:000 or 002:001~255	• H.OUT Q6807 is shorted. • H.IN Q6810 is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
• +B overvoltage (OVP)	3 times	003:000 or 003:001~255	• PH 6602 faulty. • 10.5V is not supplied. (D board)	• Power does not come on.
• Vertical deflection failure	4 times	004:000 or 004:001~255	• V.OUT IC6800 faulty D6816 faulty D6817 faulty D6824 faulty R6852 open R6851 open (D board)	• Vertical deflection pulse is stopped. • Vertical size is too small. • Vertical deflection stopped.
• White balance failure (no PICTURE)	5 times	005:000 or 005:001~255	• G2 is improperly adjusted. (Note 2) • CRT problem. • Video OUT IC9001, 9002, 9003 are faulty. (C board) • IC8306 (A board) and IC4301 (A board) are faulty.	• No raster is generated. • CRT cathode current detection reference pulse output is small.
• Horizontal deflection failure	6 times	006:000 or 006:001~225	• C6831 is open circuit. (D board)	• H pulse output is too high.
• Micro reset	—	101:00 or 101:001~225	• CRT Discharge (C Board) • Static discharge • External noise	• Power is shut down shortly, after this return back to normal. • Detect Micro latch up.

Note 1: Refer to screen (G2) Adjustment in section 6-5 of this manual.

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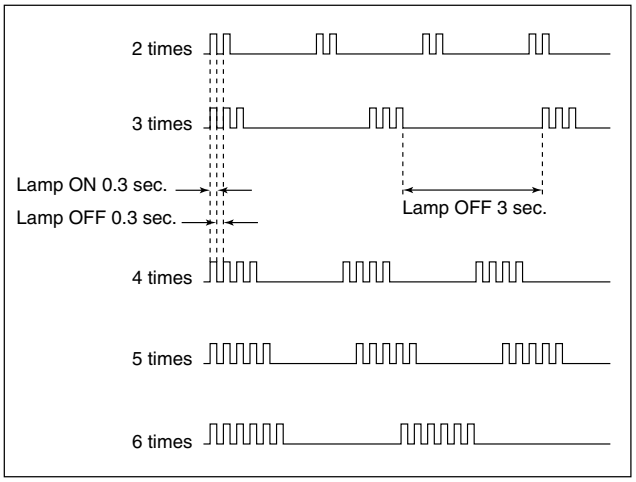
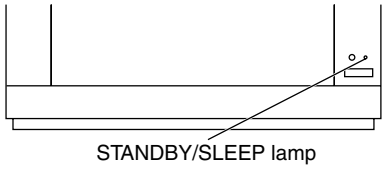
2. DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



Diagnostic Item	Flash Count*
+B overcurrent	2 times
+B overvoltage	3 times
V deflection stop	4 times
White balance failure	5 times
Horizontal Deflection Failure	6 times

* One flash count is not used for self-diagnostic.



3. STOPPING THE STANDBY/TIMER FLASH

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER lamp from flashing.

4. SELF-DIAGNOSTIC SCREEN DISPLAY

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurances of failure for confirmation on the screen:

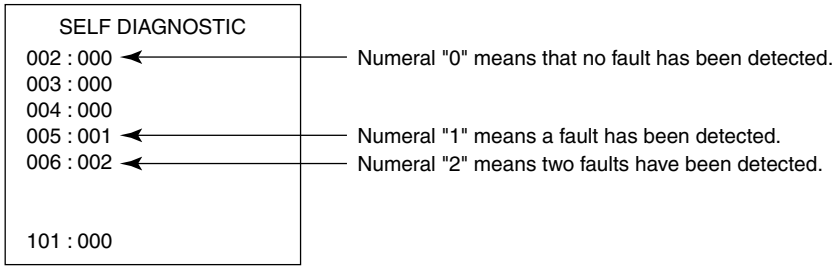
[To Bring Up Screen Test]
In standby mode, press buttons on the remote commander sequentially in rapid succession as shown below:

Screen display ➡ channel 5 ➡ Sound volume - ➡ Power ON

⇧

Note that this differs from entering the service mode (mode volume +).

Self-Diagnosis screen display


SELF DIAGNOSTIC
002 : 000
003 : 000
004 : 000
005 : 001
006 : 002
101 : 000
Numeral "0" means that no fault has been detected.
Numeral "1" means a fault has been detected.
Numeral "2" means two faults have been detected.

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5. HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

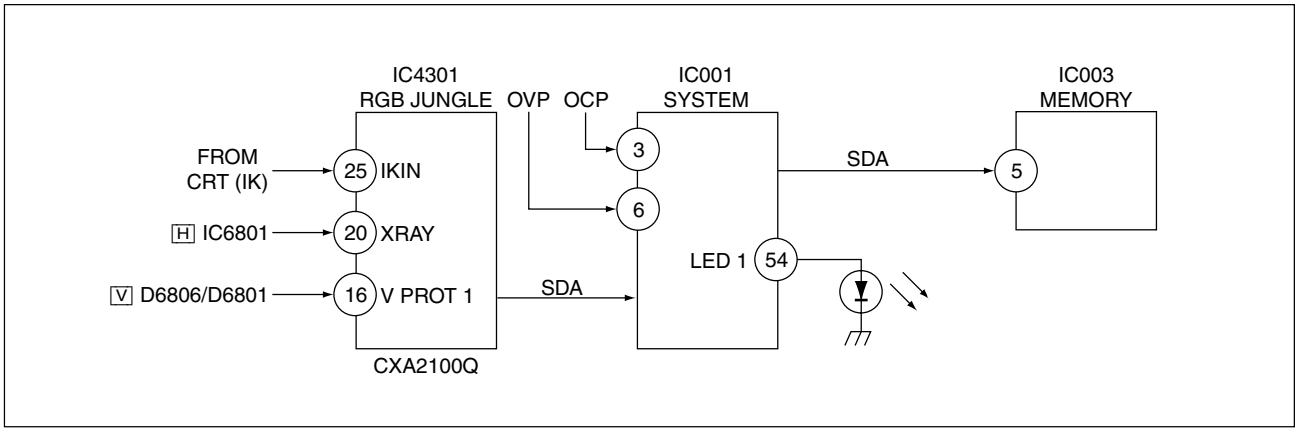
Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

[Clearing the result display]
To clear the result display to “0”, press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] ➡ 0

[Quitting Self-diagnostic screen]
To quit the entire self-diagnostic screen, turn off the power switch on the remote commander or the main unit.

6. SELF-DIAGNOSTIC CIRCUIT



+B overcurrent (OCP)	Occurs when an overcurrent on the +B(135) line is detected by Q6610 and Q6609. If Q6610 and Q6609 go to ON, the voltage to the pin3 of IC001 go to UP. The unit will automatically turn off.
+B overvoltage (OVP)	Occurs when an overvoltage on the +B(135) line is detected by D6635, Q6611 and Q6612. If Q6611 and Q6612 go to ON, the voltage to pin6 of IC001 go to UP. The unit will automatically turn off.
Vertical deflection failure	Occurs when an absence of the vertical deflection pulse is detected by Q6811, Q6819, Q6820, Q6821 and D6801. Shut down the power supply.
White balance failure	If the RGB levels do not balance or become low level within 5 seconds. This error will be detected by IC4301. TV will stay on, but there will be no picture.
High voltage protector of Horizontal Deflection	Occurs when an overvoltage of horizontal pulse is detected by D6809 and IC6801. If the voltage of 7 pin of IC6801 goes to High, the voltage to pin20 of IC4301 go to UP. The unit will automatically turn off.

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The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

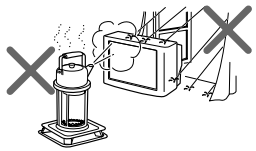
SECTION 1
GENERAL 1-1
(KV-EX29M39/EX29M87/EX34M97)

WARNING

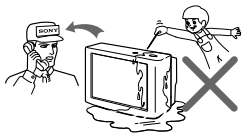
- Dangerously high voltages are present inside the TV.
- TV operating voltage: 110 – 240 V AC. (For Hong Kong and OCE only: 220-240 V AC.)

For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

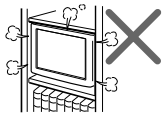
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



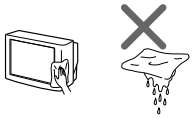
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



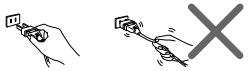
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



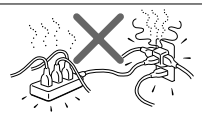
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



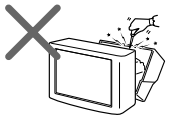
Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



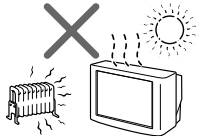
Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.

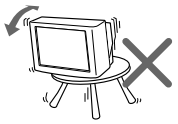


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.

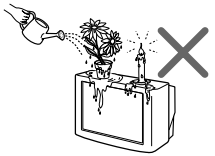


Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)



Do not install the TV in an unstable position. Use a proper TV stand.



Do not place any objects on the TV.

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Getting Started

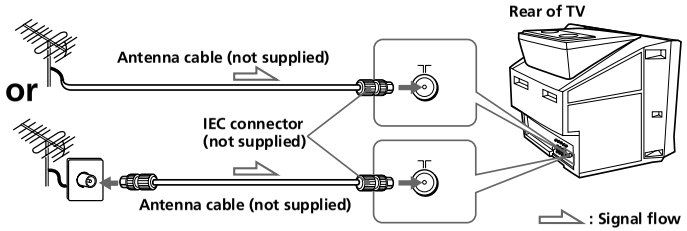
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

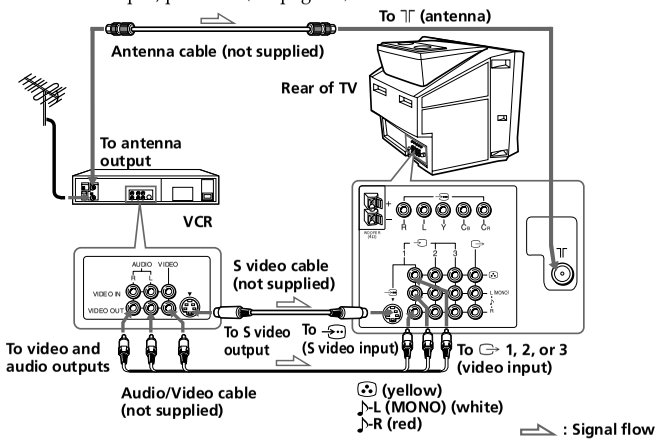
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press ⊖ (see page 12).

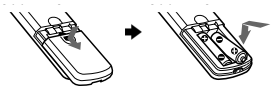


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ⊤ (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When both the ⊖ (S video input) and ⊖ 1 (video input) are connected, the ⊖ (S video input) is automatically selected. To view the video input to ⊖ 1 (video input), disconnect the S video cable.

Step 2

Insert the batteries into the remote

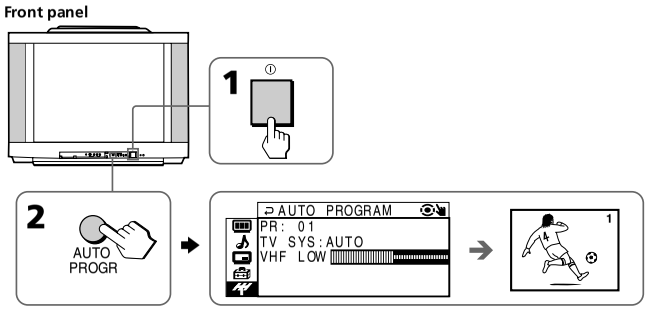


Note

- Do not use old batteries or different types of batteries together.

Step 3

Preset the channels automatically



Tips

- To stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 38).

KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

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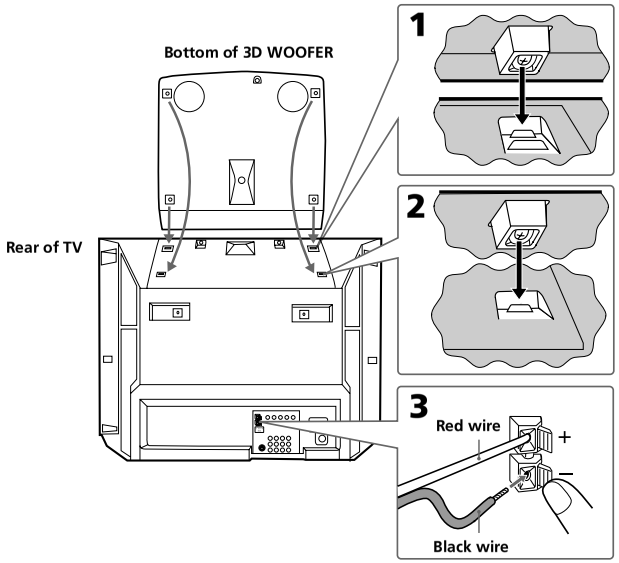
Connecting the 3D WOOFER

You can enjoy high quality sound by connecting the 3D WOOFER.



1 Place the foot at the front of the 3D WOOFER into the footholds on the top of your TV.

2 Place the foot at the rear of the 3D WOOFER into the footholds at the rear of your TV.

3 Connect the wires to the 3D WOOFER (4Ω) terminals at the rear of your TV. The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.

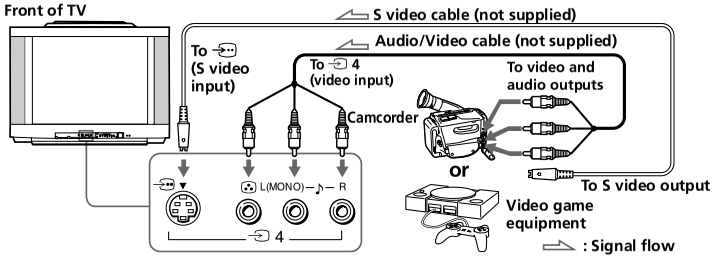
Notes

- Connect only the supplied 3D WOOFER; otherwise your TV may malfunction.
- Unplug your TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with it's neighbouring 3D WOOFER terminal.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch and operate the connected equipment, see pages 12 and 25.

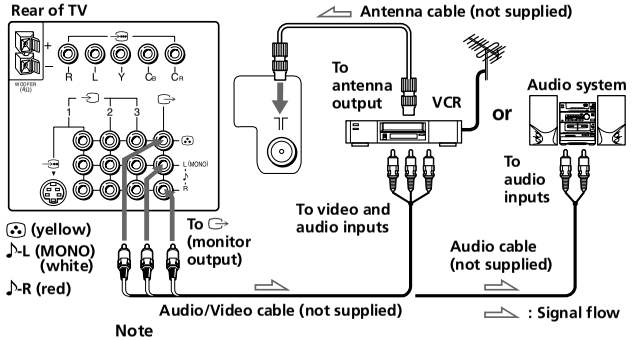
Connecting a camcorder/video game equipment using the ⇦ (video input) jacks



Notes

- When connecting video game equipment, display the "PICTURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 30).
- You can also connect video equipment to the ⇦ 1, 2, or 3 (video input) jacks at the rear of your TV.
- When both the ⇦ (S video input) and ⇦ 4 (video input) are connected, the ⇦ (S video input) is automatically selected. To view the video input to ⇦ 4 (video input), disconnect the S video cable.

Connecting audio/video equipment using the ⇨ (monitor output) jacks



Note

- If you select "DVD" on your TV screen, no signal will be output at the ⇨ (monitor output) jacks (see page 12).

continued

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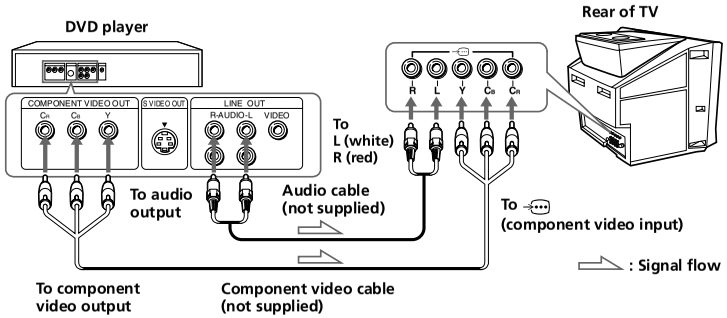
Connecting a DVD player to (component video input)

1 Using an audio cable, connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Using a component video cable, connect Y, C_B, and C_R under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.

3 Press on the remote or the TV until "DVD" appears on the screen.



Notes

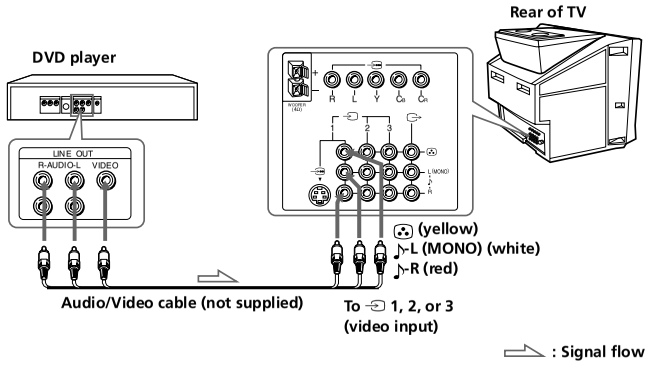
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- When connecting to (component video input) on your TV, you must connect Y, C_B, and C_R to receive the video signals, and connect L and R to receive analog audio signals.

Connecting a DVD player to (video input)

Connect 1, 2, or 3 (video input) ♪/ (audio/video) connectors on your TV to LINE OUT on your DVD player.



Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 31).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

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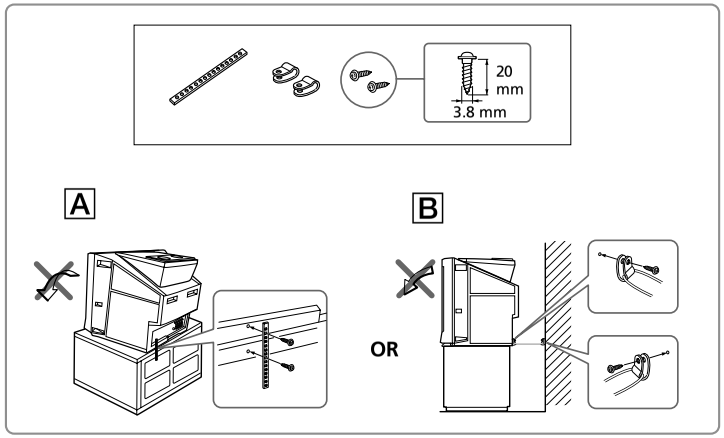
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A **With the supplied screws, attach the stabilizer band to the TV stand and to the rear of the TV using the provided hole.**

OR

B **Put the cord or chain through the clamps to secure the TV against a wall or pillar.**

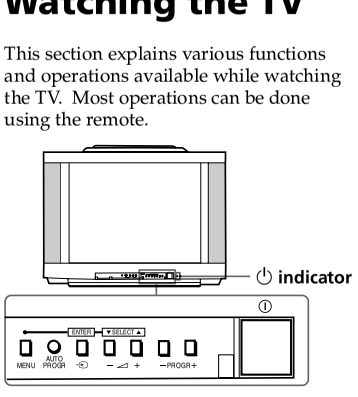


Note

- Use only the supplied screws. Use of other screws may damage the TV.

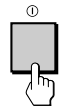
Watching the TV

This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.



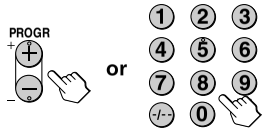
1 **Press ⏻ to turn on the TV.**

When the TV is in standby mode (the ⏻ indicator on the TV is lit red), press **I/⏻** on the remote or PROGR +/– on the TV.



2 **Press PROGR +/– or the number buttons to select the TV channel.**

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



Note

- When you turn on the TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE " in the "SETUP" menu is set "ON" (see page 35).

To select a TV program quickly

(1) Press and hold PROGR +/–.
(2) Release PROGR +/– when the desired program number appears.

Note

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

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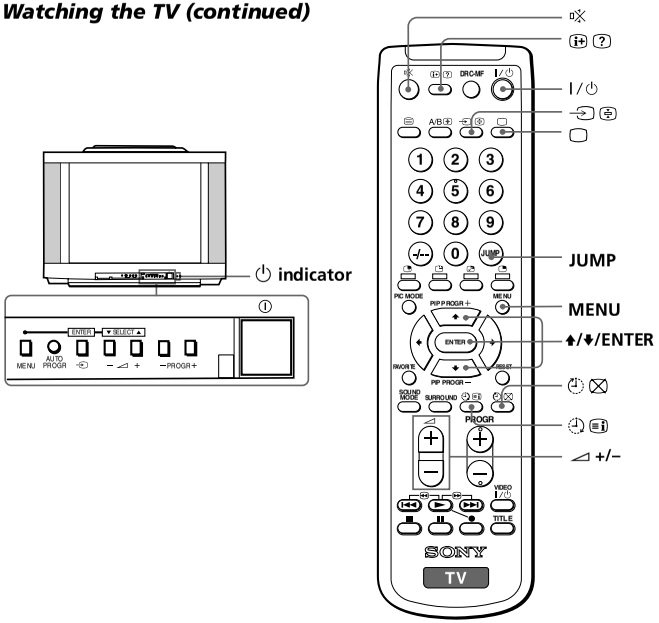


Additional tasks

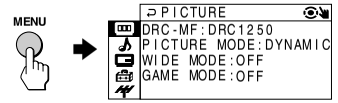
To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	⇨ (or ⇨ on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4"or "DVD". To return to the TV screen, press ▭ (or ⇨ on the TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	ⓘ.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

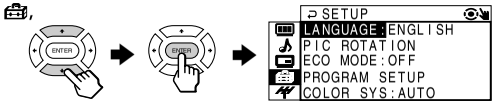
Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see **Introducing the menu system** on page 27.

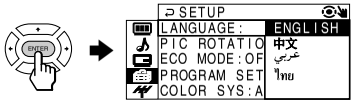
1 Press MENU.



2 Press ↑ or ↓ to select 🧰, then press ENTER.

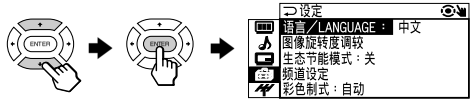


3 Make sure "LANGUAGE" is selected then press ENTER .



4 Press ↑ or ↓ to select the desired language (e.g.,"**中文**"), then press ENTER .

The selected menu language appears.



To return to the normal screen

Press MENU.

continued

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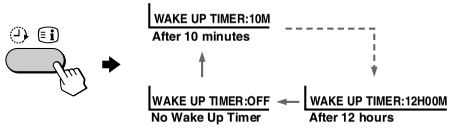
Watching the TV (continued)

Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the TV channel or video mode you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until "WAKE UP TIMER: OFF" appears, or turn off the TV's main power.

Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

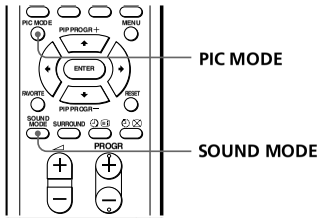
The Sleep timer starts immediately after you have set it.

To cancel the Sleep timer

Press ◴ until "SLEEP TIMER: OFF" appears, or turn the TV off.

Advanced Operations

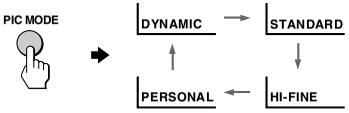
Selecting the picture and sound modes



You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.

Selecting the picture mode

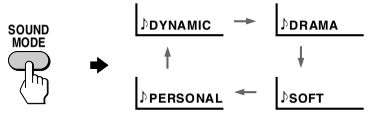
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 31).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "SOUND" menu (see page 33).

Tip

- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 30 and **Changing the "SOUND" setting** on page 32).

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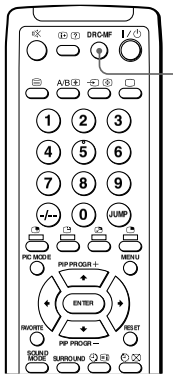
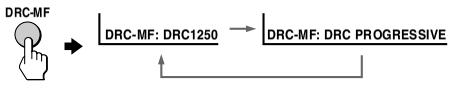
Viewing higher quality pictures

— "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC PROGRESSIVE" to reduce any jittering on the screen if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC PROGRESSIVE"	reduce jitter of any small areas or scanning lines (e.g., letters or the edge of objects) on the screen.

Tips

- You can also select the DRC-MF option using the menu (see **Changing the "PICTURE" setting** on page 30).
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "PICTURE" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 31).

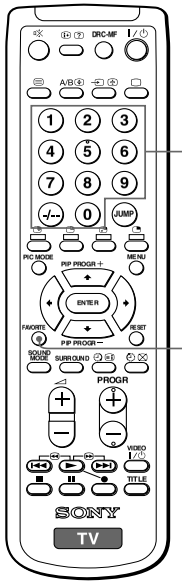
Note

- The DRC-MF mode is not selectable when the "GAME MODE" or Picture-In-Picture ("PIP") mode is turned "ON".

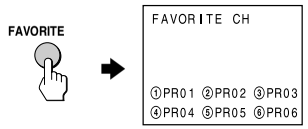
The DRC-MF logo (DRC-MF Digital Reality Creation) and "DRC-MF" are trademarks of Sony Corporation.

Viewing your favorite channels

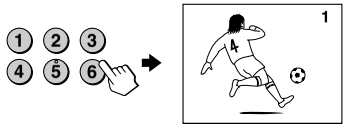
You can display and select six of your favorite channels directly from your TV screen.



1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired channel.



Tip

- To program your favorite channels, see **Adjusting each channel settings (PROGRAM SETUP)** on page 36.

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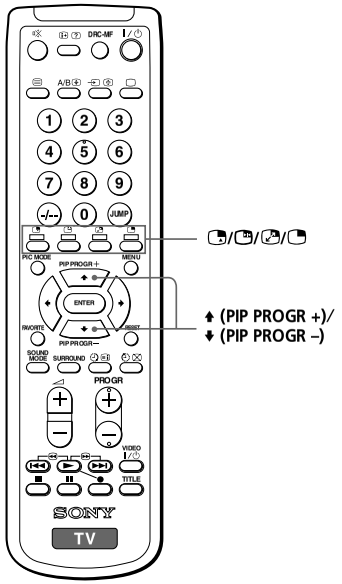
Watching two programs at the same time

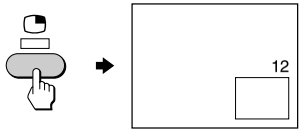
— "PIP"

With the Picture-in-Picture (PIP) feature, you can display a sub screen within the main picture of different TV programs or video inputs.



Displaying a sub screen

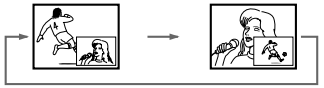
Press .



To return to the normal screen

Press (when displaying the sub screen).

Additional PIP tasks

To	Press
change a TV program in the sub screen	(PIP PROGR +) or (PIP PROGR –).
select a video input in the sub screen	.
swap pictures between the main and sub screens	. 
freeze the sub screen	. To unfreeze the screen, press the button again.

Tip

- You can also display the sub screen and exchange pictures between the main and sub screens using the menu (see **Changing the "PIP" setting** on page 34).

Notes

- When you display a video input on the sub screen at a faster/slower speed, the picture may be disrupted depending on the VCR type.
- If you display different color systems on the main screen and the sub screen, the size of the sub screen may be different and the sub screen picture may be disrupted. This does not indicate a malfunction of the TV.

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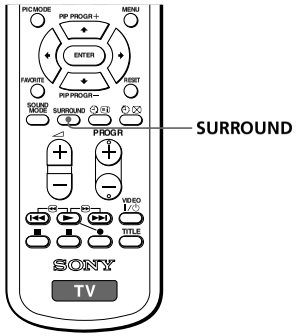
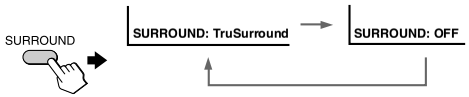
Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 32).

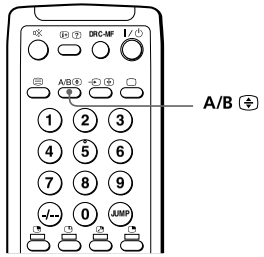
The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Enjoying stereo or bilingual programs

(KV-EX29M39, EX34M97 only)

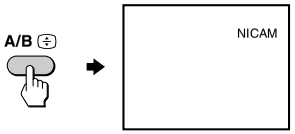
You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems.



Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound.

The CD indicator on the TV lights up red when receiving any stereo or bilingual program.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

continued

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Enjoying stereo or bilingual programs (continued)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.
- Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition in your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

MONO → AUTO

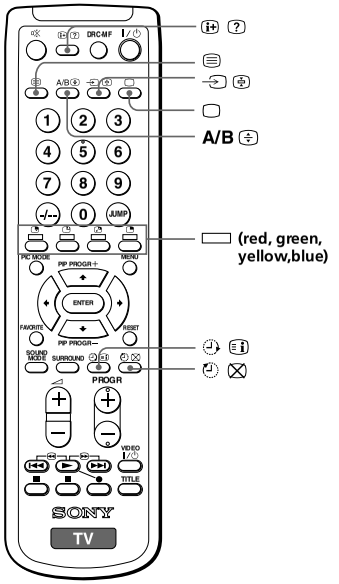
Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

Viewing Teletext

(KV-EX29M39 only)

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

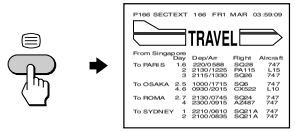


Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ▤ to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.



To turn off Teletext

Press ▢.

continued

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Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press ☰. Each time you press ☰, the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press ⓘ. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/–.
hold (pause) a Teletext display	Press ⊕ to display the symbol "⊕" at the top left corner of the screen. To resume normal Teletext viewing, press ⊕ or ☰.
reveal concealed information (e.g., an answer to a quiz)	Press ?. To conceal the information, press the button again.
enlarge the Teletext display	Press ⊕. Each time you press ⊕, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ☰ to show the text.

* You can also select a Teletext page that appears in the colored columns at the bottom of the screen using the corresponding color-coded buttons on the remote.

Using FASTEXT

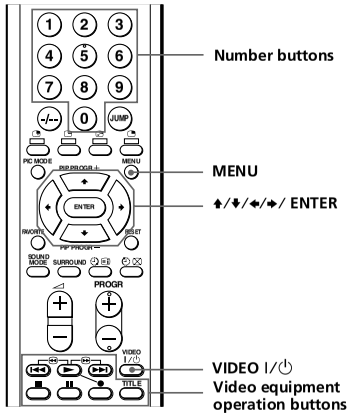
This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red , green , yellow , and blue).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

Operating optional components

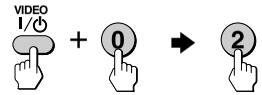
You can use the supplied remote to operate Sony video equipment such as Beta, 8 mm, VHS, MDP, CD or DVD.



Setting up the remote to work with other connected equipment

While holding down VIDEO I/⏻, press the following number combinations to enter the equipment's code number (see the chart below.)

For example, to operate a Sony 8 mm VCR:



Code numbers for Sony video equipment

To control	Hold down VIDEO I/⏻ and press
DVD	00
VTR1 (Beta)	01
VTR2 (8 mm)	02
VTR3 (VHS)	03
MDP	04
CD	06
MD	07

Notes

- If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the setting code.
- If the equipment does not have a certain function, the corresponding button on the remote will not operate.
- When you remove the batteries, the code number may revert to the factory setting.

continued

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Operating optional components (continued)

Operating a VCR using the remote

To	Press
turn on/off	VIDEO I/⏻
record	► while pressing ●.
play	►
stop	■
fast forward (▶▶)	▶▶I
rewind the tape (◀◀)	I◀◀
pause	❚❚ Press again to resume normal playback.
search the picture forward (▶▶) or backward (◀◀)	▶▶I or I◀◀ during playback. Release to resume normal playback.

Operating a DVD player using the remote

To	Press
turn on/off	VIDEO I/⏻
play	►
stop	■
pause	❚❚ Press again to resume normal playback.
step through different tracks of a disc	▶▶I to step forward or I◀◀ to step backward.
display the title menu	TITLE
display the menu	MENU while holding down ●.
select the menu item	↑/↓/←/→ while holding down ●.

Operating an MDP using the remote

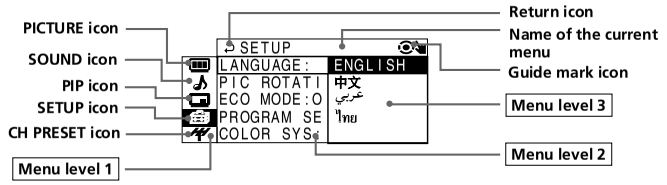
To	Press
turn on/off	VIDEO I/⏻
play	►
stop	■
pause	❚❚ Press again to resume normal playback.
step through different tracks of a disc	▶▶I to step forward or I◀◀ to step backward.

Operating a CD/MD using the remote

To	Press
turn on/off	VIDEO I/⏻
play	►
stop	■
pause	❚❚ Press again to resume normal playback.
go to the next/previous tracks	▶▶I or I◀◀
go forward (▶▶)/ backward (◀◀) quickly in a track	▶▶I or I◀◀ while holding down ►.

Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.



Level 1	Level 2	Level 3/Function
"PICTURE"	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "PROGRESSIVE"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"WIDE MODE"	Change the picture size.
	"GAME MODE"	Adjust the picture settings for video games.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE" → "BBE"*
	"SURROUND"	Select the "SURROUND" mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.
"PIP"	"POSITION"	Change the position of the sub screen.
	"PIP"	Display a sub screen within the main picture.
	"SWAP"	Exchange pictures between main screen and sub screen.

continued

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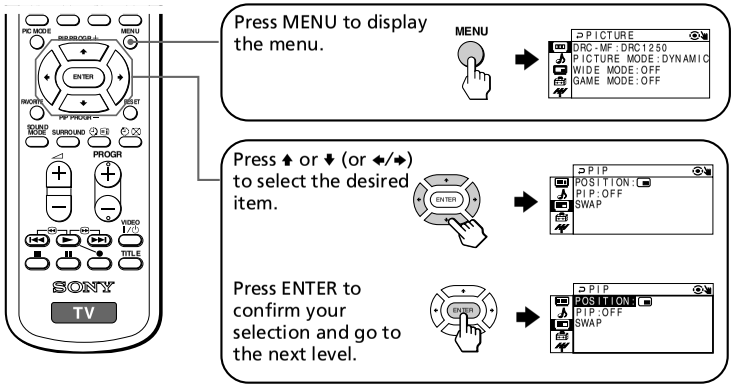
Level 1	Level 2	Level 3/Function
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文"(Chinese) → "عربي"(Arabic) → "ไทย" (Thai)
	"PIC ROTATION"	Adjust the picture position.
	"ECO MODE"	Reduce power consumption of your TV.
	"PROGRAM SETUP"	Adjust each channel settings.
	"COLOR SYS"	Select the color system: "AUTO" → "PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Select the TV system: "B/G" → "I" → "D/K" → "M"

* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

How to use the menu



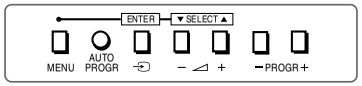
Other menu operations

To	Press
Adjust the setting value	↑, ↓, ← or →.
Move to the next/previous menu level	← or →.
Cancel the menu	MENU.

Tips

- If you want to exit from Menu level 2 to Menu level 1, press ↑ or ↓ until the return icon (↩) is highlighted, then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

Front of TV



Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

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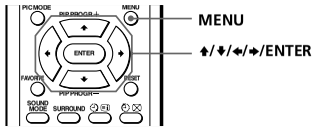
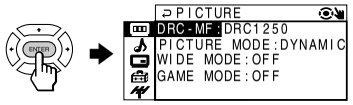
Changing the "PICTURE" setting



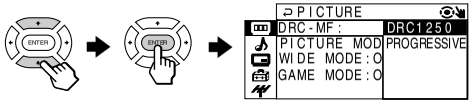
The "PICTURE" menu allows you to adjust the picture settings.

1 Press MENU.

2 Make sure the "PICTURE" icon (▭) is selected, then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "DRC-MF"), then press ENTER.



Select	To
"DRC-MF"	choose either "DRC1250" or "PROGRESSIVE".
"PICTURE MODE"	choose either "DYNAMIC", "STANDARD", "HI-FINE", "PERSONAL"*, or "ADJUST".
"WIDE MODE"	change the picture size when receiving wide-mode (16:9) picture signal. Press ↑ or ↓ to select "ON", then press ENTER. To restore the normal picture size, select "OFF", then press ENTER.
"GAME MODE"	adjust the picture setting that is suitable to view video games. Press ↑ or ↓ to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted picture settings from the "ADJUST" option. (see page 31).

Notes

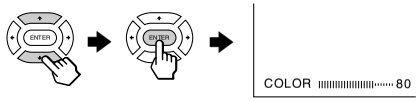
- For details on the options under "DRC-MF" and "PICTURE MODE", see pages 16 and 15 respectively.
- "GAME MODE" is available only when receiving signals through the (video input), (S video input), or (component video input) jacks at the front and rear of your TV.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "PICTURE MODE"

1 Press ↑ or ↓ to select the desired item (e.g., "COLOR"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER.

For	Press ↓ or ← to	Press ↑ or → to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"*	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

* You can adjust "HUE" for the NTSC color system only.

3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 27.

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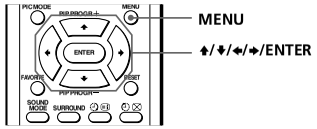
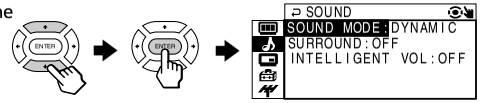
Changing the "SOUND" setting



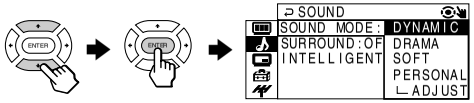
The "SOUND" menu allows you to adjust the sound settings.

1 Press MENU.

2 Press ↑ or ↓ to select the "SOUND" icon (♪), then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "SOUND MODE"), then press ENTER.



Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all TV programs and video inputs automatically. Press ↑ or ↓ to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option. (see page 33).

Note

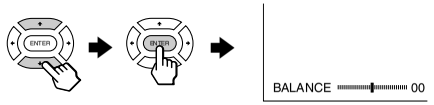
- For details on the options under "SOUND MODE" and "SURROUND", see pages 15 and 20 respectively.

To return to the normal screen

Press MENU.

Adjusting the "ADJUST" items under "SOUND MODE"

1 Press ↑ or ↓ to select the desired item (e.g., "BALANCE"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER .

For	Press ↓ or ← to	Press ↑ or → to
"BASS"	decrease the bass	increase the bass.
"TREBLE"	decrease the treble	increase the treble.
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume.
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound.	

3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 27.

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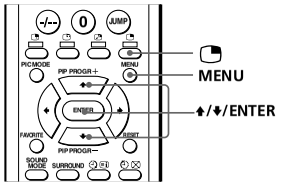
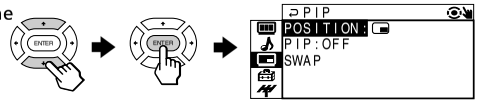
Changing the "PIP" setting

The "PIP" menu allows you to display a sub screen, change the sub screen position and exchange pictures between the main and sub screens.

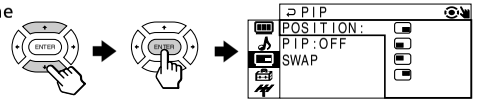


1 Press MENU.

2 Press ↑ or ↓ to select the "PIP" icon ( ), then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "POSITION"), then press ENTER.



Select	To
"POSITION"	change the position of the sub screen. Press ↑ or ↓ to select the desired position, then press ENTER .
"PIP"	display a sub screen within the main picture. Press ↑ or ↓ to select "ON", then press ENTER . To cancel, press or select "OFF", then press ENTER .
"SWAP"	exchange pictures between the main screen and sub screen.

To return to the normal screen

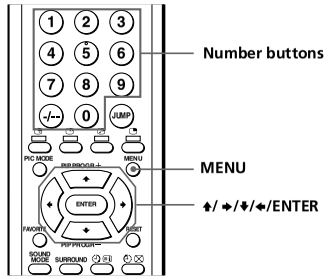
Press MENU.

Tip

- For details on the menu system and how to use the menu, see **Introducing the menu system** on page 27.

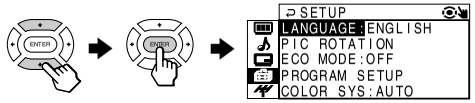
Changing the "SETUP" setting

The "SETUP" menu allows you to change the menu language, adjust the picture position, reduce your TV power consumption, setup your programs and select the color system.

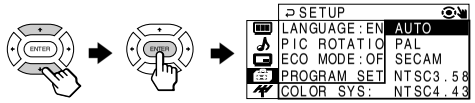


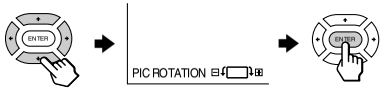
1 Press MENU.

2 Press ↑ or ↓ to select the "SETUP" icon ( ), then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "COLOR SYS"), then press ENTER.



Select	To
"LANGUAGE"	change the menu language (see **Changing the menu language** on page 13).
"PIC ROTATION"	adjust the picture position when it is not aligned with the TV screen. Press ↑, →, ↓ or ← to adjust the picture position, then press ENTER. 
"ECO MODE"	reduce power consumption of your TV to save energy. Press ↑ or ↓ to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"PROGRAM SETUP"	adjust each channel settings (see **Adjusting each channel settings (PROGRAM SETUP)** on page 36).
"COLOR SYS"	Select the color system. Normally, set this to "AUTO".

To return to the normal screen

Press MENU.

continued

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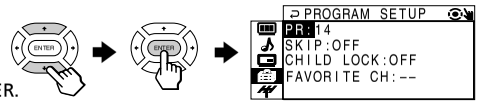
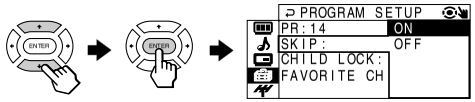
Adjusting each channel settings (PROGRAM SETUP)

1 Select "PROGRAM SETUP" from the "SETUP" menu.

2 Select "PR" and press ENTER. Press ↑ or ↓ to select the desired channel you want to adjust, then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "SKIP"), then press ENTER.



Select	To
"PR"	select the desired channel.
"SKIP"	skip unwanted or unused program number. Press ↑ or ↓ to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"CHILD LOCK"	prevent children from watching this selected channel. Press ↑ or ↓ to select "ON", then press ENTER. The lock symbol (🔒) appears on the screen. To cancel, select "OFF", then press ENTER. If you preset a locked channel, that channel will be unlocked automatically.
"FAVORITE CH"	program six channels for direct selection. Press ↑ or ↓ to select one of the six favorite channel numbers (if you decide not to make any changes, select " ⮌ "), then press ENTER. To view the selected favorite channel, refer page 17.

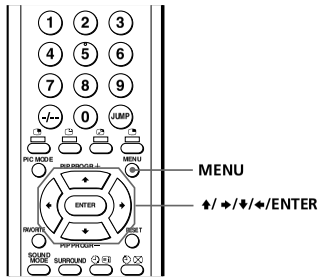
4 To continue adjusting other channels, press ↑ or ↓ to select "PR", then repeat step 2 and 3.

To return to the normal screen

Press MENU.

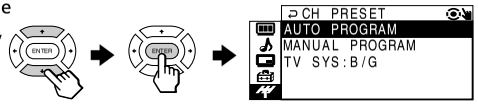
Changing the Channel Preset ("CH PRESET") setting

The "CH PRESET" menu allows you to adjust the setup of your TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.

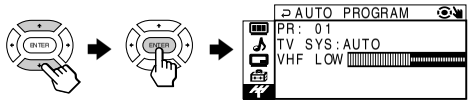


1 Press MENU.

2 Press ↑ or ↓ to select the "CH PRESET" icon ( ), then press ENTER.



3 Press ↑ or ↓ to select the desired item (e.g., "AUTO PROGRAM"), then press ENTER.



Select	To
"AUTO PROGRAM"	preset channels automatically.
"MANUAL PROGRAM"	preset channels manually. See **Presetting channels manually** on page 38.
"TV SYS"	select the TV system. Press ↑ or ↓ to select either "B/G", "I", "D/K" or "M", then press ENTER.

To return to the normal screen

Press MENU.

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 27.

continued

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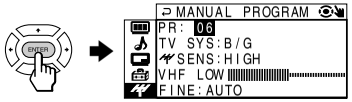
Changing the "CH PRESET" setting (continued)

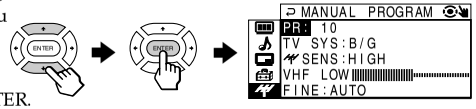
Presetting channels manually

1 After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected, then press ENTER.



(2) Press ↑ or ↓ until the program number you want to preset (e.g., program number "10") appears on the menu, then press ENTER.

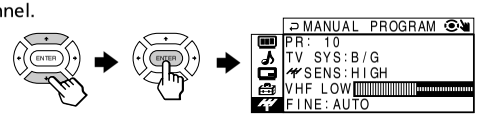


Tip

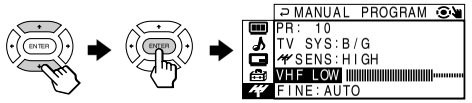
- You can also select the program number with the PROGR +/– or number buttons.

2 Select the desired channel.

(1) Press ↑ or ↓ to select either "VHF LOW", "VHF HIGH", or "UHF", then press ENTER.

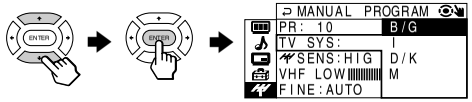


(2) Press ↑ or ↓ until the desired channel's broadcast appears on the TV screen, then press ENTER.

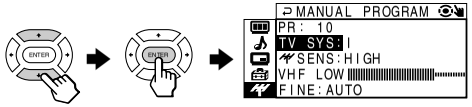


3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press ↑ or ↓ to select "TV SYS", then press ENTER.

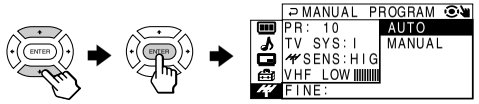


(2) Press ↑ or ↓ until the sound becomes normal, then press ENTER.

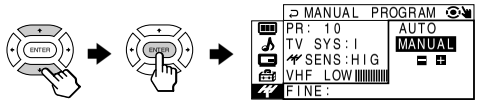


4 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

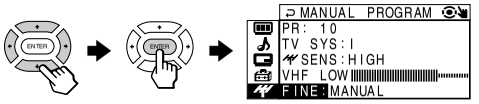
(1) Press ↑ or ↓ to select "FINE", then press ENTER.



(2) Press ↑ or ↓ to select "MANUAL", then press ENTER.

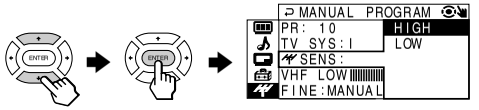


(3) Press ↑, ↓, ← or → until the picture and sound quality are optimal, then press ENTER. The + or – icon on the menu flashes while tuning.

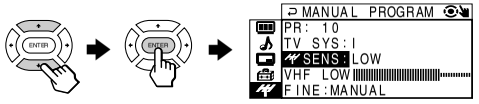


5 If the TV signal is too strong and the picture is distorted, you can adjust the TV reception sensitivity.

(1) Press ↑ or ↓ to select "SENS", then press ENTER.



(2) Press ↑ or ↓ to select "LOW", then press ENTER.



To return to the normal screen

Press MENU.

Notes

- The TV system ("TV SYS"), TV reception sensitivity ("SENS") and fine tuning ("FINE") settings are memorized for each program number.
- If you preset a locked channel ("CHILD LOCK"), that channel will be unlocked automatically (see page 36).

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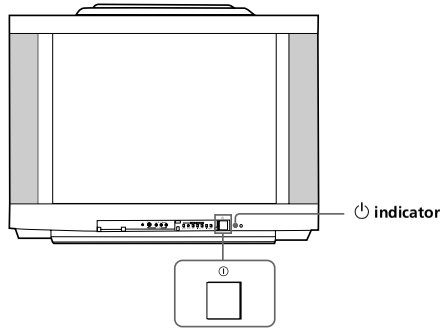
Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ (standby) indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.

Front of TV



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

3 Press ⏻ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashed.
Be sure to note the model name and serial number located on the rear of your TV.

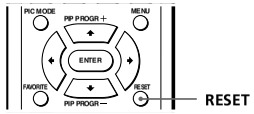
Troubleshooting

If you have any problem while viewing your TV, you can either use the Reset function or check the Troubleshooting guide below. If the problem persists, contact your Sony dealer.

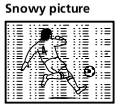
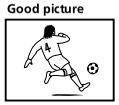
Reset function

Press the RESET button on your remote control. Your TV will go blank for about half a second then the picture will reappear with "RESET" displayed on your TV screen for about 10 seconds.

Pressing RESET will set your TV to the factory setting, but certain problems may be solved.



Troubleshooting guide

Symptom	Possible cause	Solutions	Page
Snowy picture  Noisy sound	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and at the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the "CH PRESET" menu and select "MANUAL PROGRAM" to preset the channel again.	38
	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture Noisy sound	• Broadcast signals are too strong.	• Display the "CH PRESET" menu and select "MANUAL PROGRAM". Then, select "SENS: LOW".	39
		• Turn off or disconnect the booster if it is in use.	–
Good picture  Noisy sound	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again.	37
		• If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	38

continued

KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

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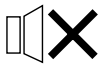
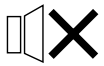
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
No picture No sound 	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power). • Press ⏻ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	11 12
Good picture No sound 	• The volume level is too low.	• Press + to increase the volume level.	12
	• The sound is muted.	• Press 🔇 to cancel the muting.	12
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	21
Dotted lines or stripes 	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts" 	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("FINE") function.	– 39
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color 	• The color level setting is too low.	• Display the "PICTURE" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.	31
	• The color system setting is inappropriate.	• Display the "SETUP" menu and check the color system ("COLOR SYS") setting (usually set this to "AUTO").	35
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–

Symptom	Possible cause	Solutions	Page
Abnormal color patches 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A/B until "AUTO" appears on the screen.	21
Stereo broadcast sound switches on and off or is distorted. **or** The sound switches between stereo and monaural frequently.	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	21
"100" appears at the top of the screen and there is no Teletext display. (KV-EX29M39 only)	• The channel carries no Teletext broadcast.	—	23
Teletext display is incomplete (snowy picture or double images). (KV-EX29M39 only)	• Connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR, and at the wall.	4
	• The antenna direction is inappropriate.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is too low.	• Try using a booster. • Use the fine tuning ("FINE") function.	– 39
Picture slant 	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may effect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SETUP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.	– 35
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	39
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need servicing.	• Contact your nearest Sony service center.	40

continued

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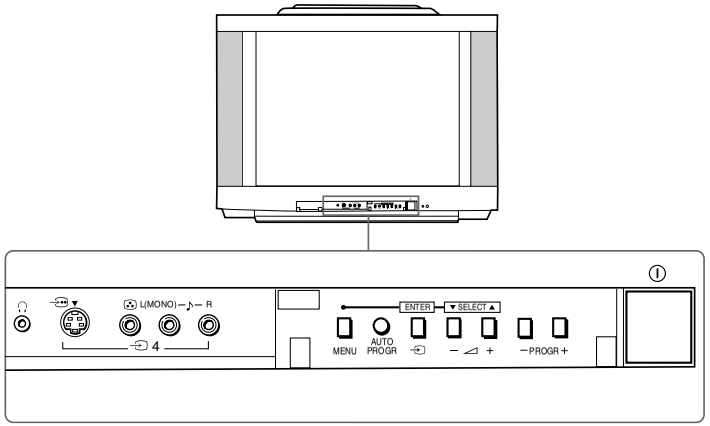
Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
Cannot play shooting games.	• Some shooting games which involve pointing a light beam at the TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	–
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	–
A small "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

Overview of controls

TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
⏻	Turn off completely or turn on the TV.	11
PROGR +/–	Select program number.	11
+/–	Adjust volume.	12
⏎	Select TV or video input.	12
MENU	Display the menu.	29
🎧	Headphone jack.	–

continued

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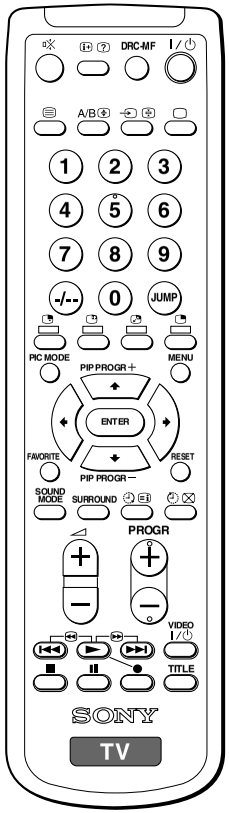
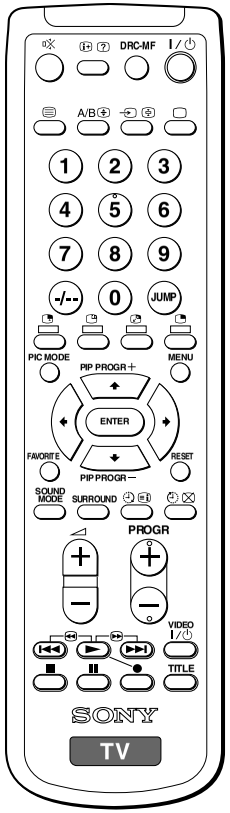
Remote control



The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations
Yellow	For PIP operations

Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	11
PROGR +/–	Select program number.	11
0 – 9, -/--	Input numbers.	11
	Display on-screen information.	12
	Mute the sound.	12
	Display the TV program.	12
	Select TV or video input.	12
+/–	Adjust volume.	12
JUMP	Jump to previous channel.	12
Timer operation		
	Set TV to turn on automatically.	14
	Set TV to turn off automatically.	14
SOUND MODE	Select sound mode.	15
PIC MODE	Select picture mode.	15
DRC-MF	Select DRC-MF mode.	16
Favorite Channel operations		
FAVORITE	Display favorite channels.	17
1 – 6	Select desired channel.	17
PIP operations		
	Display a sub screen.	18
↑ (PIP PROGR +) / ↓ (PIP PROGR –)	Change programs in the sub screen.	19
	Select video input for the sub screen.	19
	Swap main and sub screens.	19
	Freeze the sub screen.	19



Button	Function	Page
SURROUND	Select surround mode.	20
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	21
Teletext operations (KV-EX29M39 only)		
	Display Teletext broadcast.	23
	Display Teletext service contents.	24
	Stop Teletext display from scrolling.	24
	Reveal concealed information.	24
	Enlarge the Teletext display.	24
	Show TV screen while waiting for Teletext page.	24
0 - 9	Input Teletext page number.	24
PROGR +/–	Display the next or previous page.	24
(red, green, yellow, blue)	Access a FASTEXT menu.	24
Optional components operations		
VIDEO I/⏻	Power.	26
TITLE	Display the title menu.	26
	Play.	26
	Fast forward/Search forward.	26
	Rewind/Search backward.	26
	Record.	26
	Stop.	26
	Pause.	26
Menu operations		
MENU	Display the menu.	29
↑, ↓, ←, →	Select and adjust items.	29
ENTER	Confirm selected items.	29
RESET	Set TV to factory setting.	41

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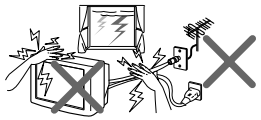
The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL 1-2
(KV-EX29M93/EX29M65)

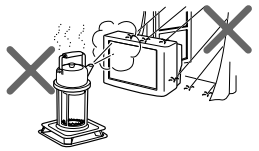
WARNING

- Dangerously high voltages are present inside the TV.
- TV operating voltage: 220 – 240 V AC.

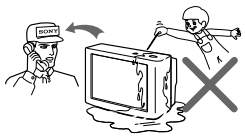


For your own safety, do not touch any part of the TV, the power cord and the antenna cable during lightning storms.

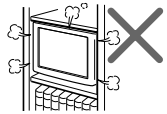
For children's safety, do not leave children alone with the TV. Do not allow children to climb onto it.



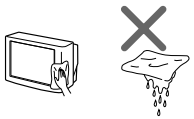
To prevent fire or shock hazard, do not expose the TV to rain or moisture.



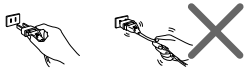
Do not operate the TV if any liquid or solid object falls into it. Have it checked immediately by qualified personnel only.



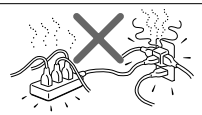
Do not block the ventilation openings of the TV. Do not install the TV in a confined space, such as a bookcase or built-in cabinet.



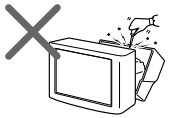
Clean the TV with a dry and soft cloth. Do not use benzine, thinner, or any other chemicals to clean the TV. Do not scratch the picture tube.



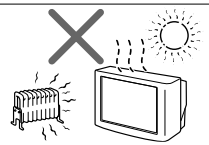
Pull the power cord out by the plug. Do not pull the power cord itself. Disconnect the TV before moving it or if you are not going to use it for several days.



Do not plug in too many appliances to the same power socket. Do not damage the power cord.

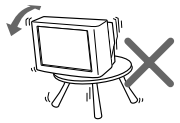


Do not open the cabinet and the rear cover of the TV as high voltages and other hazards are present inside the TV. Refer servicing and disposal of the TV to qualified personnel.

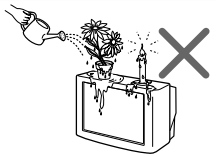


Your TV is recommended for home use only. Do not use the TV in any vehicle or where it may be subject to excessive dust, heat, moisture or vibrations.

WARNING (continued)



Do not install the TV in an unstable position. Use a proper TV stand.



Do not place any objects on the TV.

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Getting Started

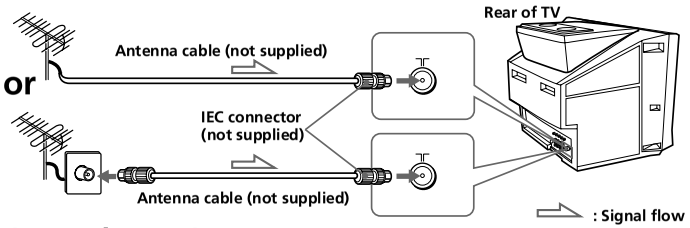
CAUTION

- Do not connect the power cord until you have completed making all other connections; otherwise a minimum leakage current might flow through the antenna and other terminals to ground.
- To avoid battery leakage and damage to the remote, remove the batteries from the remote if you are not going to use it for several days. If any liquid that leaks from the batteries touches you, immediately wash it away with water.

Step 1

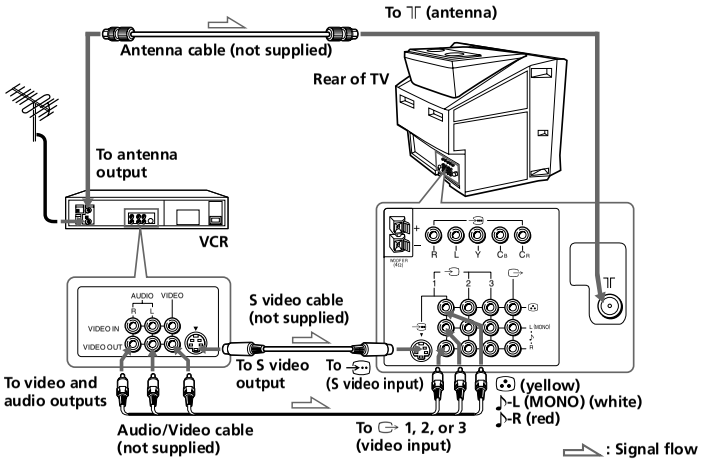
Connect the antenna

If you wish to connect a VCR, see the **Connecting a VCR** diagram below.



Connecting a VCR

To watch the video input, press ⇨ (see page 12).

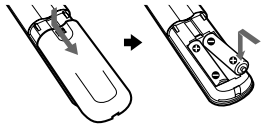


Notes

- If you connect a monaural VCR, connect the yellow plug to (the yellow jack) and the black plug to ♪-L (MONO) (the white jack).
- If you connect a VCR to the ⊤ (antenna) terminal, preset the signal output from the VCR to the program number 0 on the TV.
- When both the ⇨ (S video input) and ⇨ 1 (video input) are connected, the ⇨ (S video input) is automatically selected. To view the video input to ⇨ 1 (video input), disconnect the S video cable.
- When no signal is input from the connected video equipment, the TV screen becomes blue.

Step 2

Insert the batteries into the remote

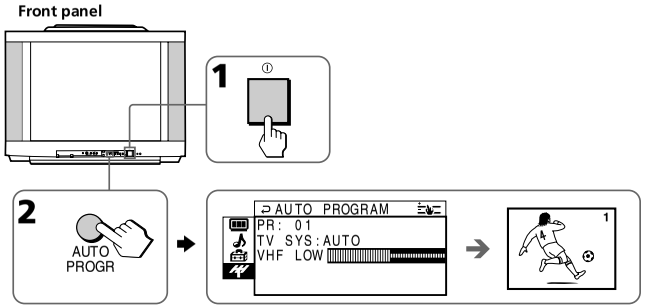


Note

- Do not use old batteries or different types of batteries together.

Step 3

Preset the channels automatically



Tips

- To stop the automatic channel presetting, press MENU.
- If your TV has preset an unwanted channel or cannot preset a particular channel, then preset your TV manually (see page 31).

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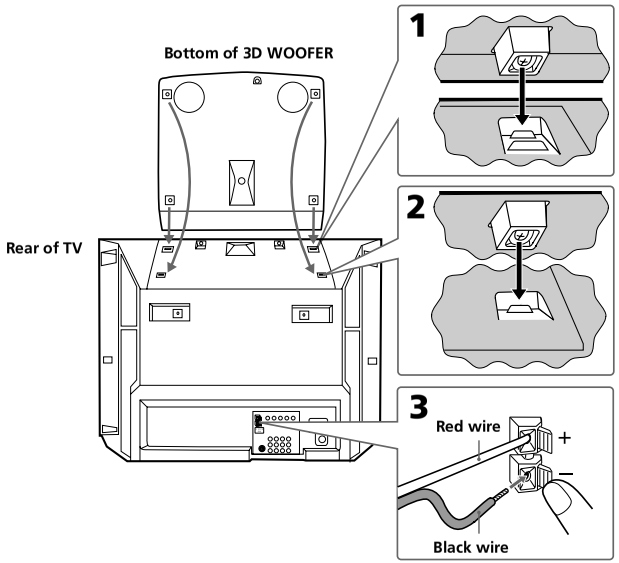
Connecting the 3D WOOFER

You can enjoy high quality sound by connecting the 3D WOOFER.



1 Place the foot at the front of the 3D WOOFER into the footholds on the top of your TV.

2 Place the foot at the rear of the 3D WOOFER into the footholds at the rear of your TV.

3 Connect the wires to the 3D WOOFER (4Ω) terminals at the rear of your TV. The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.

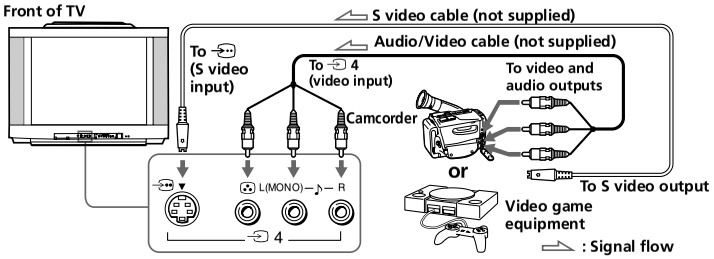
Notes

- Connect only the supplied 3D WOOFER; otherwise your TV may malfunction.
- Unplug your TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with it's neighbouring 3D WOOFER terminal.

Connecting optional components

You can connect optional audio/video components, such as a VCR, multi disc player, camcorder, video game, or stereo system. To watch the picture from the connected equipment, see page 12.

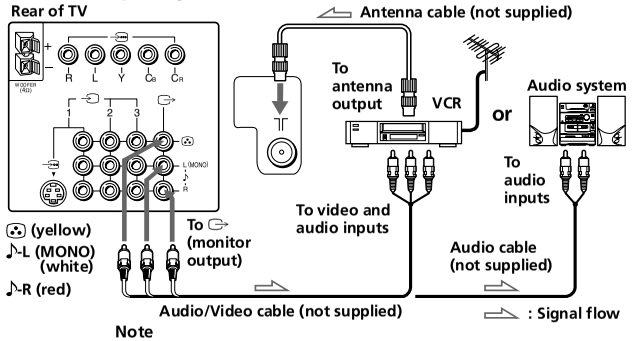
Connecting a camcorder/video game equipment using the ⇦ (video input) jacks



Notes

- When connecting video game equipment, display the "PICTURE" menu and select "ON" for "GAME MODE" to adjust the picture setting that is suitable for video games (see page 24).
- You can also connect video equipment to the ⇦ 1, 2, or 3 (video input) jacks at the rear of your TV.
- When both the ⇦ (S video input) and ⇦ 4 (video input) are connected, the ⇦ (S video input) is automatically selected. To view the video input to ⇦ 4 (video input), disconnect the S video cable.

Connecting audio/video equipment using the ⇨ (monitor output) jacks



Note

- If you select "DVD" on your TV screen, no signal will be output at the ⇨ (monitor output) jacks (see page 12).

continued

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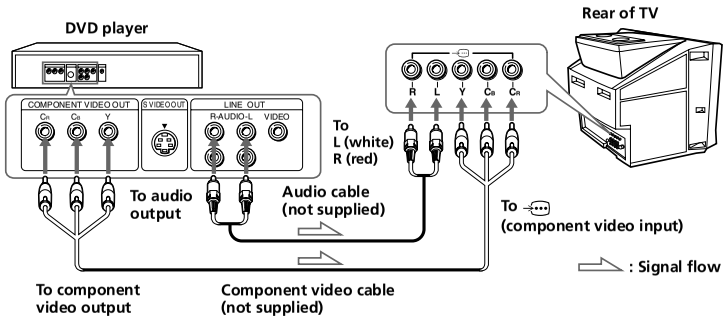
Connecting optional components (continued)

Connecting a DVD player to (component video input)

1 Using an audio cable, connect R and L under (component video input) on your TV to the LINE OUT, AUDIO R and L output connectors on your DVD player.

2 Using a component video cable, connect Y, C_B, and C_R under (component video input) on your TV to the COMPONENT VIDEO OUT Y, C_B, and C_R output connectors on your DVD player.

3 Press on the remote or the TV until "DVD" appears on the screen.



Notes

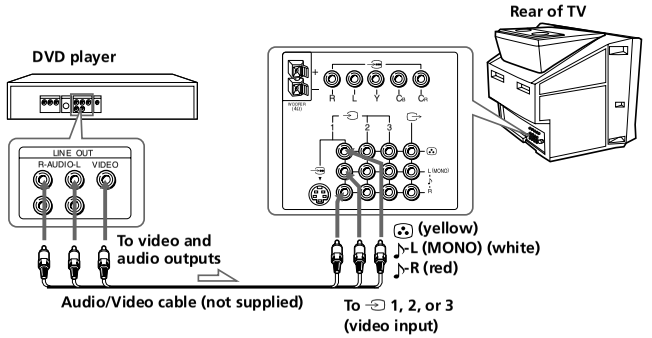
- Some DVD player terminals may be labeled differently:

Connect	To (on the DVD player)
Y (green)	Y
C_B (blue)	C_b, B-Y or P_B
C_R (red)	C_r, R-Y or P_R

- When connecting to (component video input) on your TV, you must connect Y, C_B, and C_R to receive the video signals, and connect L and R to receive analog audio signals.

Connecting a DVD player to (video input)

Connect 1, 2, or 3 (video input) ♪/ (audio/video) connectors on your TV to LINE OUT on your DVD player.



Notes

- Since the high quality pictures on a DVD disc contain a lot of information, picture noise may appear. In this case, adjust the sharpness ("SHARP") under "PERSONAL ADJUST" in the "PICTURE MODE" menu (see page 25).
- Connect your DVD player directly to your TV. Connecting the DVD player through other video equipment will cause unwanted picture noise.

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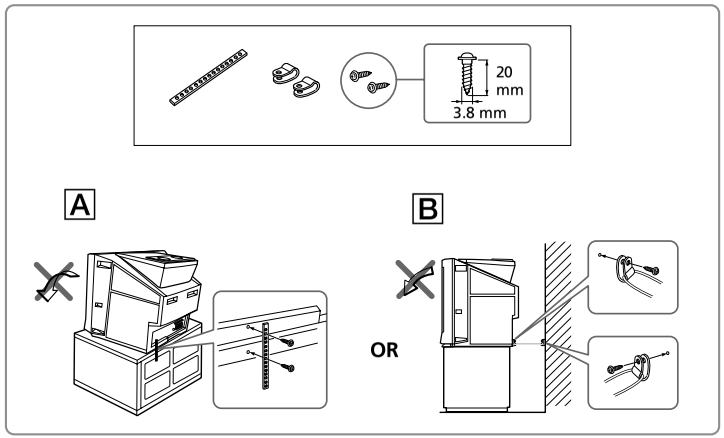
Securing the TV

To prevent the TV from falling, secure the TV using one of the following methods:

A With the supplied screws, attach the stabilizer band to the TV stand and to the rear of the TV using the provided hole.

OR

B Put the cord or chain through the clamps to secure the TV against a wall or pillar.

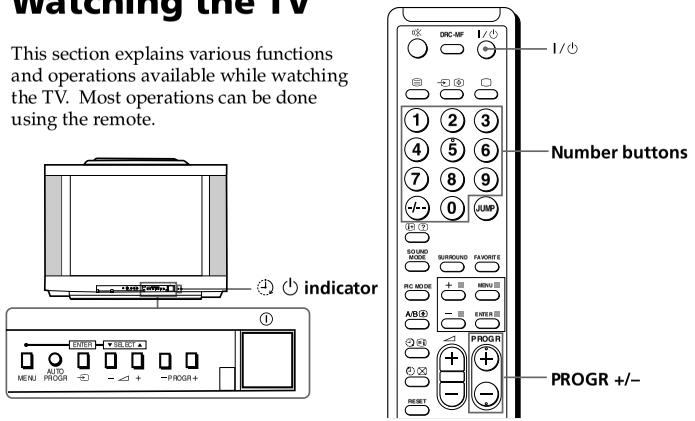


Note

- Use only the supplied screws. Use of other screws may damage the TV.

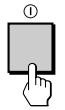
Watching the TV

This section explains various functions and operations available while watching the TV. Most operations can be done using the remote.



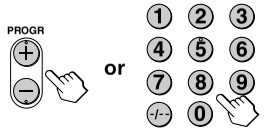
1 Press ⏻ to turn on the TV.

When the TV is in standby mode (the ⏻ indicator on the TV is lit red), press I/⏻ on the remote or PROGR +/– on the TV.



2 Press PROGR +/– or the number buttons to select the TV channel.

For double digit numbers, press -/--, then the number (e.g., for 25, press -/--, then 2 and 5).



Note

- When you turn on the TV, either the program number or video mode is displayed for approximately 40 seconds. The ECO MODE (ECO) icon will also appear if "ECO MODE " in the "SETUP" menu is set "ON" (see page 28).

To select a TV program quickly

(1) Press and hold PROGR +/–.
(2) Release PROGR +/– when the desired program number appears.

Note

- When you select a TV program quickly, the picture may be disrupted. This does not indicate a malfunction.

continued

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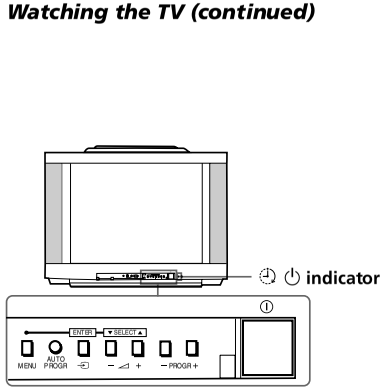
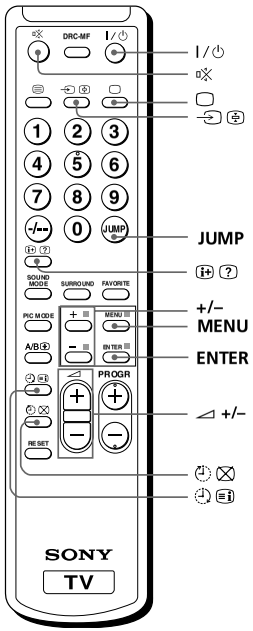
Watching the TV (continued)





Additional tasks

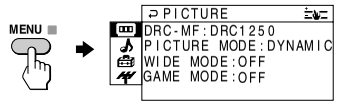
To	Press
Turn off temporarily	I/⏻. The ⏻ indicator on the TV lights up red.
Turn off completely	⏻ on the TV.
Adjust the volume	+/–.
Mute the sound	🔇.
Watch the video input (VCR, camcorder, etc.)	(or on the TV) to select "VIDEO 1", "VIDEO 2", "VIDEO 3", "VIDEO 4"or "DVD". To return to the TV screen, press (or on the TV).
Jump back to the previous channel	JUMP.
Display the on-screen information*	.

* Some picture/sound settings, and either the program number or video mode are displayed. The on-screen display for the picture/sound settings disappears after about 3 seconds.

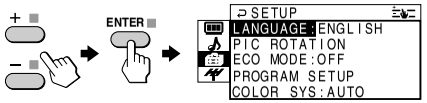
Changing the menu language

You can change the menu language as well as the on-screen language. For details on how to use the menu, see **Introducing the menu system** on page 21.

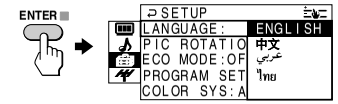
1 Press MENU.



2 Press + or – to select , then press ENTER.

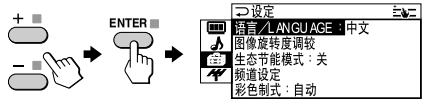


3 Make sure "LANGUAGE" is selected then press ENTER .



4 Press + or – to select the desired language (e.g., "**中文** "), then press ENTER .

The selected menu language appears.



To return to the normal screen

Press MENU.

continued

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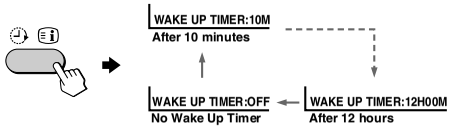
Setting the Wake Up timer

1 Press ◴ until the desired period of time appears.

The Wake Up timer starts immediately after you have set it.



2 Select the TV channel or video mode you want to wake up to.

3 Press I/⏻, or set the Sleep timer if you want the TV to turn off automatically.

The ◴ indicator on the TV lights up orange.

To cancel the Wake Up timer

Press ◴ until "WAKE UP TIMER: OFF" appears, or turn off the TV's main power.

Note

- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up timer, the TV automatically goes into standby mode. To resume watching the TV, press any button or control on the TV or the remote.

Setting the Sleep timer

Press ◴ until the desired period of time appears.

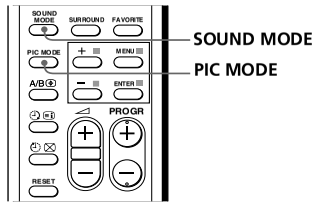
The Sleep timer starts immediately after you have set it.

To cancel the Sleep timer

Press ◴ until "SLEEP TIMER: OFF" appears, or turn the TV off.

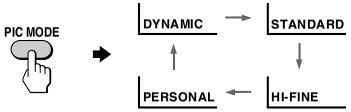
Selecting the picture and sound modes

You can select picture and sound modes and adjust the setting to your preference in the "PERSONAL" option.



Selecting the picture mode

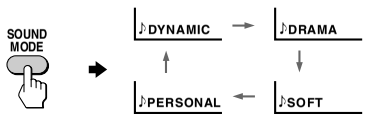
Press PIC MODE repeatedly until the desired picture mode is selected.



Select	To
"DYNAMIC"	receive high contrast pictures.
"STANDARD"	receive normal pictures.
"HI-FINE"	receive higher resolution pictures with mild contrast.
"PERSONAL"	receive the last adjusted picture setting from the "ADJUST" option in the "PICTURE" menu (see page 25).

Selecting the sound mode

Press SOUND MODE repeatedly until the desired sound mode is selected.



Select	To
"DYNAMIC"	listen to dynamic and clear sound that emphasizes both the low and high tones.
"DRAMA"	listen to sound that emphasizes voice and high tones.
"SOFT"	receive soft sound.
"PERSONAL"	receive the last adjusted sound setting from the "ADJUST" option in the "SOUND" menu (see page 27).

Tip

- You can also set the picture and sound modes using the menu (see **Changing the "PICTURE" setting** on page 24 and **Changing the "SOUND" setting** on page 26).

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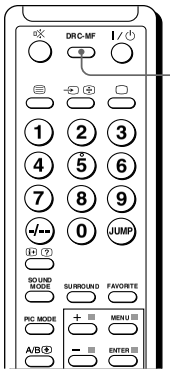
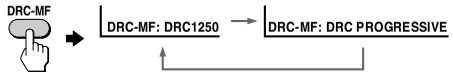
Viewing higher quality pictures

— "DRC-MF"

The Digital Reality Creation-Multi Function (DRC-MF) feature allows you to enjoy higher quality pictures on your TV. You can select "DRC1250" to watch super real (higher resolution) pictures, or "DRC PROGRESSIVE" to reduce any jittering on the screen if necessary.



Press DRC-MF repeatedly until you receive the desired picture quality.



Select	To
"DRC1250"	select higher resolution pictures.
"DRC PROGRESSIVE"	reduce jitter of any small areas or scanning lines (e.g., letters or the edge of objects) on the screen.

Tips

- You can also select the DRC-MF option using the menu (see **Changing the "PICTURE" setting** on page 24).
- When the broadcast signal is weak, you may see some dots or noise on the TV screen. To reduce this interference, display the "PICTURE" menu and select "ADJUST" in "PICTURE MODE", then adjust "SHARP" to reduce the sharpness (see page 25).

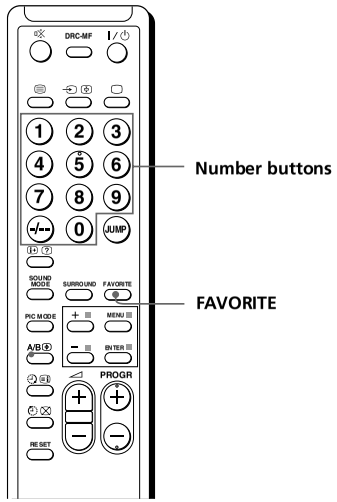
Note

- The DRC-MF mode is not selectable when the "GAME MODE" is turned "ON".

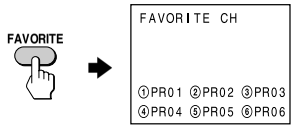
The DRC-MF logo (DRC-MF Digital Reality Creation) and "DRC-MF" are trademarks of Sony Corporation.

Viewing your favorite channels

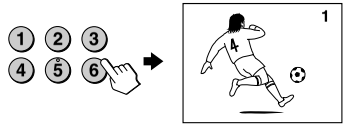
You can display and select six of your favorite channels directly from your TV screen.



1 Press FAVORITE.



2 Press the number button from 1 to 6 to select the desired channel.



Tip

- To program your favorite channels, see **Adjusting each channel settings (PROGRAM SETUP)** on page 29.

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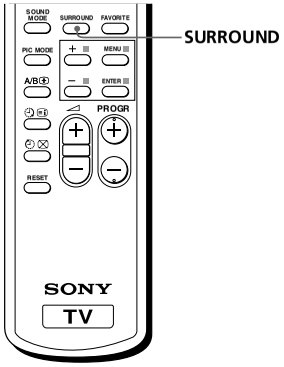
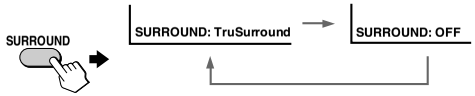
Listening with surround sound

The surround feature enables you to enjoy the sound effects of a concert hall or movie theater.



Press SURROUND repeatedly until you receive the desired surround sound.



Select	To
"TruSurround"	listen to the surround sound that spreads out to the rear of a room.
"OFF"	turn off the surround sound.

Tip

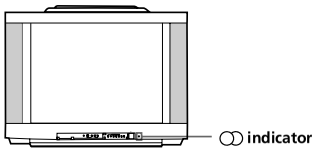
- You can also select the surround option using the menu (see **Changing the "SOUND" setting** on page 26).

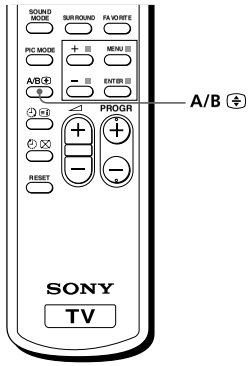
The surround of your TV is categorized as TruSurround.

TruSurround™ is a trademark of SRS Labs, Inc. SRS and the SRS symbol are registered trademarks of SRS Labs, Inc. in the United States and selected foreign countries. SRS and TruSurround are incorporated under license from SRS Labs, Inc. and are protected under United States Patent Nos. 4,748,669 and 4,841,572 with numerous additional issued and pending foreign patents.

Enjoying stereo or bilingual programs

You can enjoy stereo sound or bilingual programs of NICAM and A2 stereo systems.

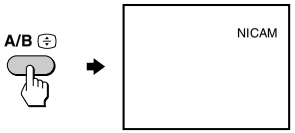




Press A/B repeatedly until you receive the sound you want.

The on-screen display changes to show the selected sound.

The indicator on the TV lights up red when receiving any stereo or bilingual program.



When receiving a NICAM program

Broadcasting	On-screen display (Selected sound)
NICAM stereo	NICAM (Stereo sound) → MONO (Regular sound)
NICAM bilingual	NICAM MAIN (Main sound) → NICAM SUB (Sub sound) → MONO (Regular sound)
NICAM monaural	NICAM MAIN (Main sound) → MONO (Regular sound)

continued

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Enjoying stereo or bilingual programs (continued) (KV-EX29M65)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.

If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

MONO → AUTO

Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

Enjoying stereo or bilingual programs (continued) (KV-EX29M93)

When receiving an A2 program

Broadcasting	On-screen display (Selected sound)
A2 stereo	MONO (Regular sound) → STEREO (Stereo sound)
A2 bilingual	MAIN (Main sound) → SUB (Sub sound)

Receiving area for NICAM and A2 programs

System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, Malaysia, Thailand, etc.
A2	Australia, Malaysia, Thailand, etc.

Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a NICAM program, select "MONO". The sound becomes monaural, but the noise is reduced.
- Before receiving a NICAM stereo program in China, please check the NICAM broadcast condition in your area. When receiving a NICAM stereo program, the receiving conditions might vary depending on area. In addition, different strength of the NICAM broadcast signal might affect the receiving quality.

If the sound is distorted when receiving a monaural program through the ⅂ (antenna) terminal

Press A/B repeatedly until "MONO" appears on the screen.

To cancel the monaural sound setting, press A/B again until "AUTO" appears on the screen.

MONO → AUTO

Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive a stereo broadcast signal when the TV is in the "MONO" setting. Normally, set the TV to "AUTO".

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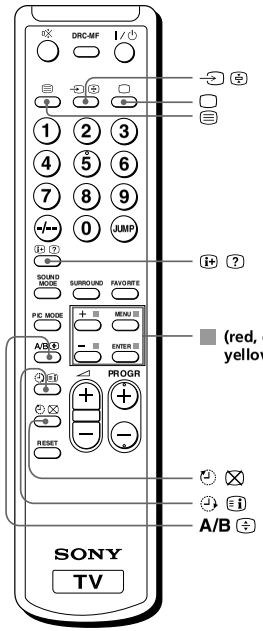
Viewing Teletext

(KV-EX29M65 only)

Some TV stations broadcast an information service called Teletext which allows you to receive various information, such as stock market reports and news.

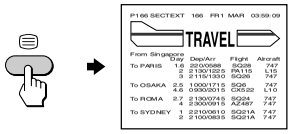


Displaying Teletext

1 Select a TV channel that carries the Teletext broadcast you want to watch.

2 Press ▤ to display the text.

A Teletext page (normally the index page) is displayed. If there is no Teletext broadcast, "100" is displayed at the top left corner of the screen.



To turn off Teletext

Press ▢.

continued

Viewing teletext (continued)

Additional Teletext tasks

To	Do this
display a Teletext page on the TV picture	Press ▤. Each time you press ▤, the screen changes as follows: Teletext → Teletext and TV → TV.
check the contents of a Teletext service	Press ▤i. An overview of the Teletext contents, including page numbers, appears on the screen.
select a Teletext page	Press the number buttons to enter the three-digit page number of the desired Teletext page.* If you make a mistake, reenter the correct page number. To access the next or previous page, press PROGR +/–.
hold (pause) a Teletext display	Press ⊕ to display the symbol "⊕" at the top left corner of the screen. To resume normal Teletext viewing, press ⊕ or ▤.
reveal concealed information (e.g., an answer to a quiz)	Press ?. To conceal the information, press the button again.
enlarge the Teletext display	Press ⊕. Each time you press ⊕, the Teletext display changes as follows: Enlarge upper half → Enlarge lower half → Normal size.
stand by for a Teletext page while watching a TV program	1 Enter the Teletext page number that you want to refer to, then press ⊠. 2 When the page number is displayed, press ▤ to show the text.

* You can also select a Teletext page that appears in the colored columns at the bottom of the screen using the corresponding color-coded buttons on the remote.

Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT program is broadcast, colored menus appear at the bottom of the screen. The color of each menu corresponds to the color-coded buttons on the remote (red ■, green ■, yellow ■, and blue ■).

To access a FASTEXT menu

Press the color-coded button on the remote corresponding to the menu you want. The menu page appears on the screen after a few seconds.

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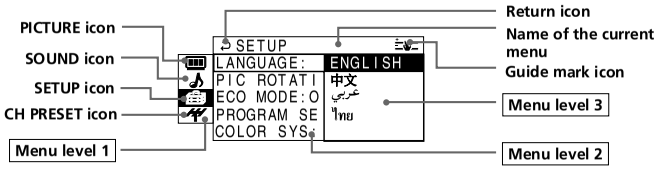
Introducing the menu system

The MENU button lets you open a menu and change the settings of your TV. The following is an overview of the menu system.



Level 1	Level 2	Level 3/Function
"PICTURE"	"DRC-MF"	Select the "DRC-MF" mode: "DRC1250" → "PROGRESSIVE"
	"PICTURE MODE"	Select the picture mode: "DYNAMIC" → "STANDARD" → "HI-FINE" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "PICTURE" → "COLOR" → "BRIGHT" → "HUE" → "SHARP"
	"WIDE MODE"	Change the picture size.
	"GAME MODE"	Adjust the picture settings for video games.
"SOUND"	"SOUND MODE"	Select the sound mode: "DYNAMIC" → "DRAMA" → "SOFT" → "PERSONAL" → "ADJUST"
	"ADJUST"	Adjust the "PERSONAL" option: "BASS" → "TREBLE" → "BALANCE" → "BBE"*
	"SURROUND"	Select the "SURROUND" mode: "TruSurround" → "OFF"
	"INTELLIGENT VOL"	Adjust volume automatically.

continued

Introducing the menu system (continued)

Level 1	Level 2	Level 3/Function
"SETUP"	"LANGUAGE"	Change the menu language: "ENGLISH" → "中文" (Chinese) → "عربي" (Arabic) → "ไทย" (Thai)
	"PIC ROTATION"	Adjust the picture position.
	"ECO MODE"	Reduce power consumption of your TV.
	"PROGRAM SETUP"	Adjust each channel settings.
	"COLOR SYS"	Select the color system: "AUTO" → " PAL" → "SECAM" → "NTSC3.58" → "NTSC4.43"
"CH PRESET"	"AUTO PROGRAM"	Preset channels automatically.
	"MANUAL PROGRAM"	Preset channels manually.
	"TV SYS"	Select the TV system: "B/G" → "I" → "D/K" → "M"

* The BBE is manufactured by Sony Corporation under license from BBE Sound, Inc. It is covered by U.S. Patent No. 4,638,258 and No. 4,482,866. The word "BBE" and the BBE symbol are the trademarks of BBE Sound, Inc.

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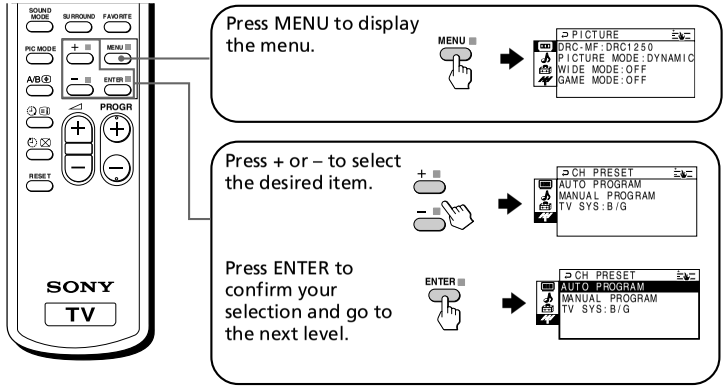
How to use the menu



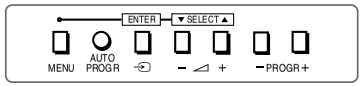
Other menu operations

To	Press
Adjust the setting value	+ or –.
Return to the previous menu level	ENTER.
Cancel the menu	MENU.

Tips

- If you want to exit from Menu level 2 to Menu level 1, press + or – until the return icon (⮌) is highlighted, then press ENTER.
- Some of the menu items can be operated directly using the remote buttons.
- The MENU, ENTER, and SELECT ▼/▲ buttons on the TV can also be used for the operations above.

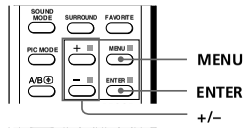
Front of TV



Note

- If more than 60 seconds elapse between entries, the menu screen automatically disappears.

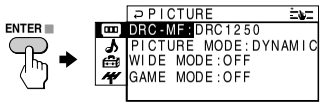
Changing the "PICTURE" setting



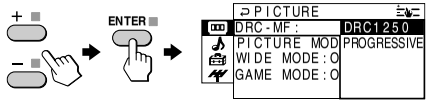
The "PICTURE" menu allows you to adjust the picture settings.

1 Press MENU.

2 Make sure the "PICTURE" icon ( ) is selected, then press ENTER.



3 Press + or – to select the desired item (e.g., "DRC-MF"), then press ENTER.



Select	To
"DRC-MF"	choose either "DRC1250" or "PROGRESSIVE".
"PICTURE MODE"	choose either "DYNAMIC", "STANDARD", "HI-FINE", "PERSONAL"*, or "ADJUST".
"WIDE MODE"	change the picture size when receiving wide-mode (16:9) picture signal. Press + or – to select "ON", then press ENTER. To restore the normal picture size, select "OFF", then press ENTER.
"GAME MODE"	adjust the picture setting that is suitable to view video games. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted picture settings from the "ADJUST" option (see page 25).

Notes

- For details on the options under "DRC-MF" and "PICTURE MODE", see pages 16 and 15 respectively.
- "GAME MODE" is available only when receiving signals through the (video input), (S video input), or (component video input) jacks at the front and rear of your TV.

To return to the normal screen

Press MENU.

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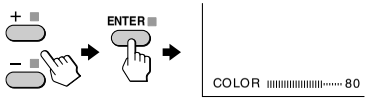
Adjusting the "ADJUST" items under "PICTURE MODE"

1 Press + or – to select the desired item (e.g.,"COLOR"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER.

For	Press – to	Press + to
"PICTURE"	decrease picture contrast	increase picture contrast
"COLOR"	decrease color intensity	increase color intensity
"BRIGHT"	darken the picture	brighten the picture
"HUE"*	increase red picture tones	increase green picture tones
"SHARP"	soften the picture	sharpen the picture

* You can adjust "HUE" for the NTSC color system only.

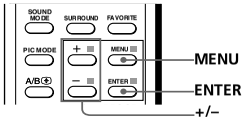
3 Repeat the above steps to adjust other items.

The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 21.

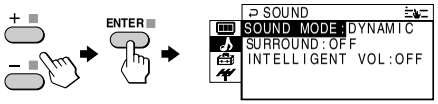
Changing the "SOUND" setting



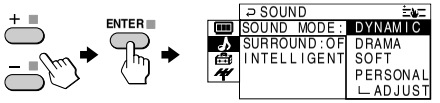
The "SOUND" menu allows you to adjust the sound settings.

1 Press MENU.

2 Press + or – to select the "SOUND" icon (♪), then press ENTER.



3 Press + or – to select the desired item (e.g., "SOUND MODE"), then press ENTER.



Select	To
"SOUND MODE"	choose either "DYNAMIC", "DRAMA", "SOFT", "PERSONAL"*, or "ADJUST".
"SURROUND"	choose either "TruSurround" or "OFF".
"INTELLIGENT VOL"	adjust the volume of all TV programs and video inputs automatically. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.

* When the "PERSONAL" mode is selected, you can receive the last adjusted sound settings from the "ADJUST" option (see page 27).

Note

- For details on the options under "SOUND MODE" and "SURROUND", see pages 15 and 18 respectively.

To return to the normal screen

Press MENU.

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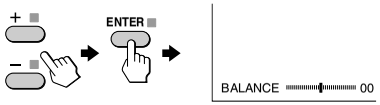
Adjusting the "ADJUST" items under "SOUND MODE"

1 Press + or – to select the desired item (e.g., "BALANCE"), then press ENTER.



2 Adjust the value according to the following table, then press ENTER .

For	Press – to	Press + to
"BASS"	decrease the bass	increase the bass.
"TREBLE"	decrease the treble	increase the treble.
"BALANCE"	increase the left speaker's volume	increase the right speaker's volume.
"BBE"	select "HIGH" for higher enhancement of sound clarity; select "LOW" for lower enhancement of sound clarity; select "OFF" to turn off the BBE sound.	

3 Repeat the above steps to adjust other items.

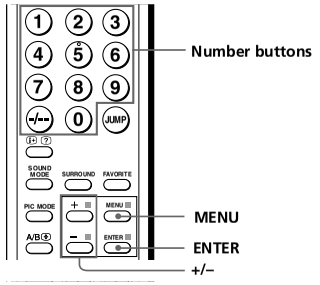
The adjusted settings will be received when you select "PERSONAL".

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 23.

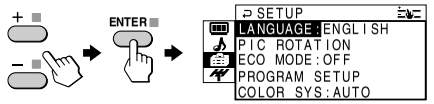
Changing the "SETUP" setting

The "SETUP" menu allows you to change the menu language, adjust the picture position, reduce your TV power consumption, setup your programs and select the color system.

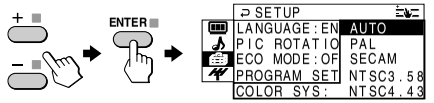


1 Press MENU.

2 Press + or – to select the "SETUP" icon (), then press ENTER.



3 Press + or – to select the desired item (e.g., "COLOR SYS"), then press ENTER.



Select	To
"LANGUAGE"	change the menu language (see **Changing the menu language** on page 13).
"PIC ROTATION"	adjust the picture position when it is not aligned with the TV screen. Press + or – to adjust the picture position, then press ENTER.
"ECO MODE"	reduce power consumption of your TV to save energy. Press + or – to select "ON", then press ENTER. To cancel, select "OFF", then press ENTER.
"PROGRAM SETUP"	adjust each channel settings (see **Adjusting each channel settings (PROGRAM SETUP)** on page 31).
"COLOR SYS"	select the color system. Normally, set this to "AUTO".

To return to the normal screen

Press MENU.

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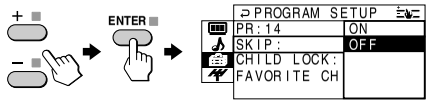
Adjusting each channel settings (PROGRAM SETUP)

1 Select “PROGRAM SETUP” from the “SETUP” menu.

2 Select “PR” and press ENTER. Press + or – to select the desired channel you want to adjust, then press ENTER.

3 Press + or – to select the desired item (e.g., “SKIP”), then press ENTER.



Select	To
“PR”	select the desired channel.
“SKIP”	skip unwanted or unused program number. Press + or – to select “ON”, then press ENTER. To cancel, select “OFF”, then press ENTER.
“CHILD LOCK”	prevent children from watching this selected channel. Press + or – to select “ON”, then press ENTER. The lock symbol (🔒) appears on the screen. To cancel, select “OFF”, then press ENTER. If you preset a locked channel, that channel will be unlocked automatically.
“FAVORITE CH”	program six channels for direct selection. Press + or – to select one of the six favorite channel numbers (if you decide not to make any changes, select “↩”), then press ENTER. To view the selected favorite channel, refer page 17.

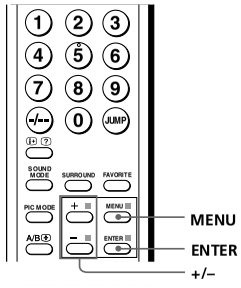
4 To continue adjusting other channels, press + or – to select “PR”, then repeat step 2 and 3.

To return to the normal screen

Press MENU.

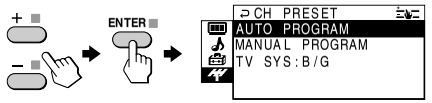
Changing the Channel Preset (“CH PRESET”) setting

The “CH PRESET” menu allows you to adjust the setup of your TV. For example, you can manually tune in a channel with a weak signal that fails to be tuned in by automatic presetting.

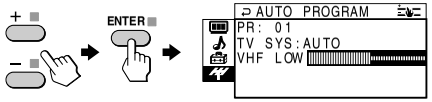


1 Press MENU.

2 Press + or – to select the “CH PRESET” icon (📡), then press ENTER.



3 Press + or – to select the desired item (e.g., “AUTO PROGRAM”), then press ENTER.



Select	To
“AUTO PROGRAM”	preset channels automatically.
“MANUAL PROGRAM”	preset channels manually. See **Presetting channels manually** on page 33.
“TV SYS”	select the TV system. Press + or – to select either “B/G”, “I”, “D/K” or “M”, then press ENTER.

To return to the normal screen

Press MENU.

Tip

- For details on the menu system and how to use the menu, refer to **Introducing the menu system** on page 23.

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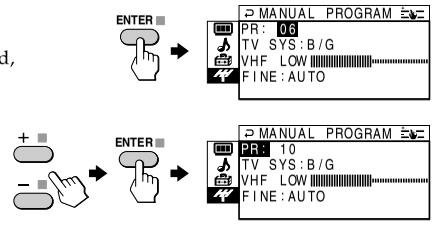
Presetting channels manually

1 After selecting "MANUAL PROGRAM", select the program number to which you want to preset a channel.

(1) Make sure "PR" is selected, then press ENTER.

(2) Press + or – until the program number you want to preset (e.g., program number "10") appears on the menu, then press ENTER.



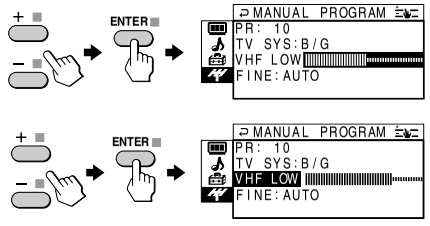
Tip

- You can also select the program number with the PROGR +/– or number buttons.

2 Select the desired channel.

(1) Press + or – to select either "VHF LOW", "VHF HIGH", or "UHF", then press ENTER.

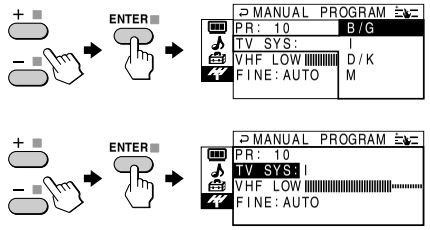
(2) Press + or – until the desired channel's broadcast appears on the TV screen, then press ENTER.



3 If the sound of the desired channel is abnormal, select the appropriate TV system.

(1) Press + or – to select "TV SYS", then press ENTER.

(2) Press + or – until the sound becomes normal, then press ENTER.



continued

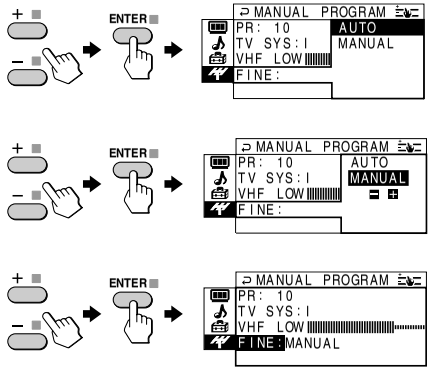
Changing the "CH PRESET" setting (continued)

4 If you are not satisfied with the picture and sound quality, you may be able to improve them by using the "FINE" tuning feature.

(1) Press + or – to select "FINE", then press ENTER.

(2) Press + or – to select "MANUAL", then press ENTER.

(3) Press + or – until the picture and sound quality are optimal, then press ENTER. The + or – icon on the menu flashes while tuning.



To return to the normal screen

Press MENU.

Notes

- The TV system ("TV SYS") and fine tuning ("FINE") settings are memorized for each program number.
- If you preset a locked channel ("CHILD LOCK"), that channel will be unlocked automatically (see page 29).

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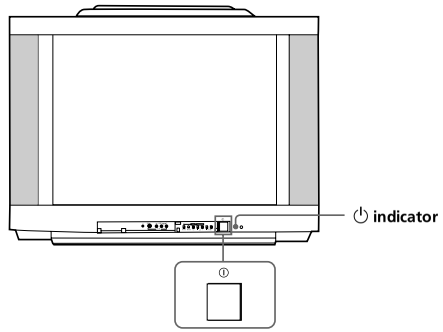
Self-diagnosis function

Your TV is equipped with a self-diagnosis function. If there is a problem with your TV, the ⏻ (standby) indicator flashes red. The number of times the ⏻ indicator flashes indicates the possible causes.

Front of TV



1 Check that the ⏻ indicator flashes red a number of times between 3-second intervals.

2 Count the number of times the ⏻ indicator flashes.

3 Press ⏻ (main power) to turn off your TV.

4 Inform your nearest Sony service center about the number of times the ⏻ indicator flashed.
Be sure to note the model name and serial number located on the rear of your TV.

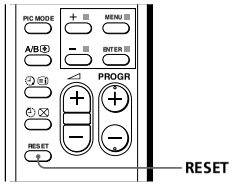
Troubleshooting

If you have any problem while viewing your TV, you can either use the Reset function or check the Troubleshooting guide below. If the problem persists, contact your Sony dealer.

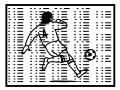
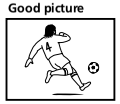
Reset function

Press the RESET button on your remote control. Your TV will go blank for about half a second then the picture will reappear with "RESET" displayed on your TV screen for about 10 seconds.

Pressing RESET will set your TV to the factory setting, but certain problems may be solved.



Troubleshooting guide

Symptom	Possible cause	Solutions	Page
Snowy picture  Noisy sound	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and at the wall.	4
	• Channel presetting is inappropriate or incomplete.	• Display the "CH PRESET" menu and select "MANUAL PROGRAM" to preset the channel again.	31
	• The antenna type is inappropriate.	• Check the antenna type (VHF/UHF). Contact a Sony dealer for advice.	–
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Signal transmission is low.	• Try using a booster.	–
Distorted picture Noisy sound	• Broadcast signals are too strong.	• Turn off or disconnect the booster if it is in use.	–
Good picture  Noisy sound	• The TV system setting or channel presetting is inappropriate or incomplete.	• If the sound of all the channels are noisy, display the "CH PRESET" menu and select "AUTO PROGRAM" to preset the channels again. • If the sound of some channels is noisy, select the channel, then display the "CH PRESET" menu and select the appropriate TV system ("TV SYS").	30 31

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Troubleshooting (continued)

Symptom	Possible cause	Solutions	Page
No picture **No sound**	• The power cord, antenna or VCR is not connected.	• Check the power cord, antenna and the VCR connections.	4
	• The TV is not turned on.	• Press I/⏻ (power). • Press ⏻ (main power) on the TV to turn off the TV for about five seconds, then turn it on again.	11 12
Good picture **No sound**	• The volume level is too low.	• Press + to increase the volume level.	12
	• The sound is muted.	• Press 🔇 to cancel the muting.	12
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	19
Dotted lines or stripes	• There is local interference from cars, neon signs, hair dryers, power generators, etc.	• Do not use a hair dryer or other equipment near the TV. • Adjust the antenna direction for minimum interference. Contact a Sony dealer for advice.	– –
Double images or "ghosts"	• Broadcast signals are reflected by nearby mountains or buildings.	• Use a highly directional antenna. • Use the fine tuning ("FINE") function.	– 32
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• Use of a booster is inappropriate.	• Turn off or disconnect the booster if it is in use.	–
No color	• The color level setting is too low.	• Display the "PICTURE" menu and select "ADJUST" of "PICTURE MODE", then adjust the "COLOR" level.	25
	• The color system setting is inappropriate.	• Display the "SETUP" menu and check the color system ("COLOR SYS") setting (usually set this to "AUTO").	28
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–

continued

Symptom	Possible cause	Solutions	Page
Abnormal color patches	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may affect the TV.	• Keep external speakers or other equipment away from the TV. Do not move the TV while the TV is turned on. Press ⏻ (main power) on the TV to turn off the TV for about five minutes, then turn it on again.	–
TV cannot receive stereo broadcast signal.	• The stereo reception setting is inappropriate.	• Press A/B until "AUTO" appears on the screen.	19
Stereo broadcast sound switches on and off or is distorted. **or** **The sound switches between stereo and monaural frequently.**	• The connection is loose or the cable is damaged.	• Check the antenna cable and connection on the TV, VCR and on the wall.	4
	• The antenna direction needs adjustment.	• Adjust the antenna direction. Contact a Sony dealer for advice.	–
	• The broadcast signal has a transmission problem.	• Press A/B until a better sound is heard.	19
Picture slant	• The magnetic disturbance from external speakers or other equipment, or the direction of the earth's magnetic field may effect the TV.	• Keep external speakers or other electrical equipment away from the TV. • Display the "SETUP" menu and adjust "PIC ROTATION" so that the picture is aligned to the TV screen.	– 28
Lines moving across the TV screen.	• There is interference from external sources, e.g., heavy machineries, nearby broadcast station.	• Use the fine tuning ("FINE") function.	32
The ⏻ indicator on your TV flashes red a number of times between 3-second intervals.	• Your TV may need servicing.	• Contact your nearest Sony service center.	33
Cannot play shooting games.	• Some shooting games which involve pointing a light beam at the TV screen with an electronic gun or rifle cannot be used with your TV. For detail, see the instruction manual supplied with the video game software.	—	–

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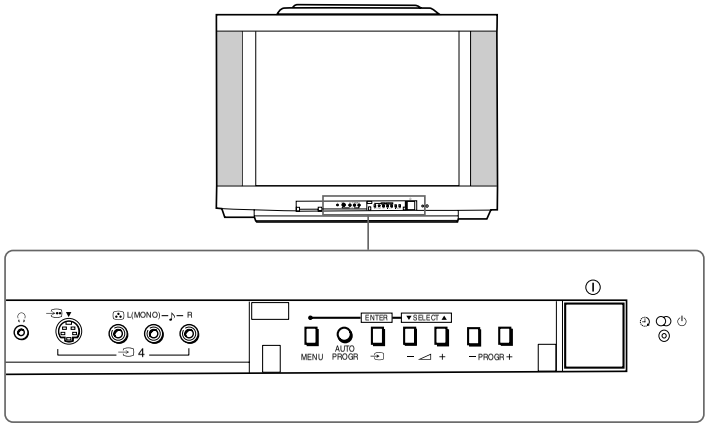
Symptom	Possible cause	Solutions	Page
TV cabinet creaks.	• Changes in room temperature sometimes make the TV cabinet expand or contract, causing a noise. This does not indicate a malfunction.	—	–
A small "boom" sound is heard when the TV is turned on.	• The TV's demagnetizing function is working. This does not indicate a malfunction.	—	–

Overview of controls

TV front panel



Button	Function	Page
AUTO PROGR	Preset channels automatically.	5
⏻	Turn off completely or turn on the TV.	11
PROGR +/–	Select program number.	11
⏻	Standby indicator.	11
+/–	Adjust volume.	12
⏎	Select TV or video input.	12
🕘	Wake Up indicator.	14
∞	Stereo/Bilingual indicator.	19
MENU	Display the menu.	25
🎧	Headphone jack.	–

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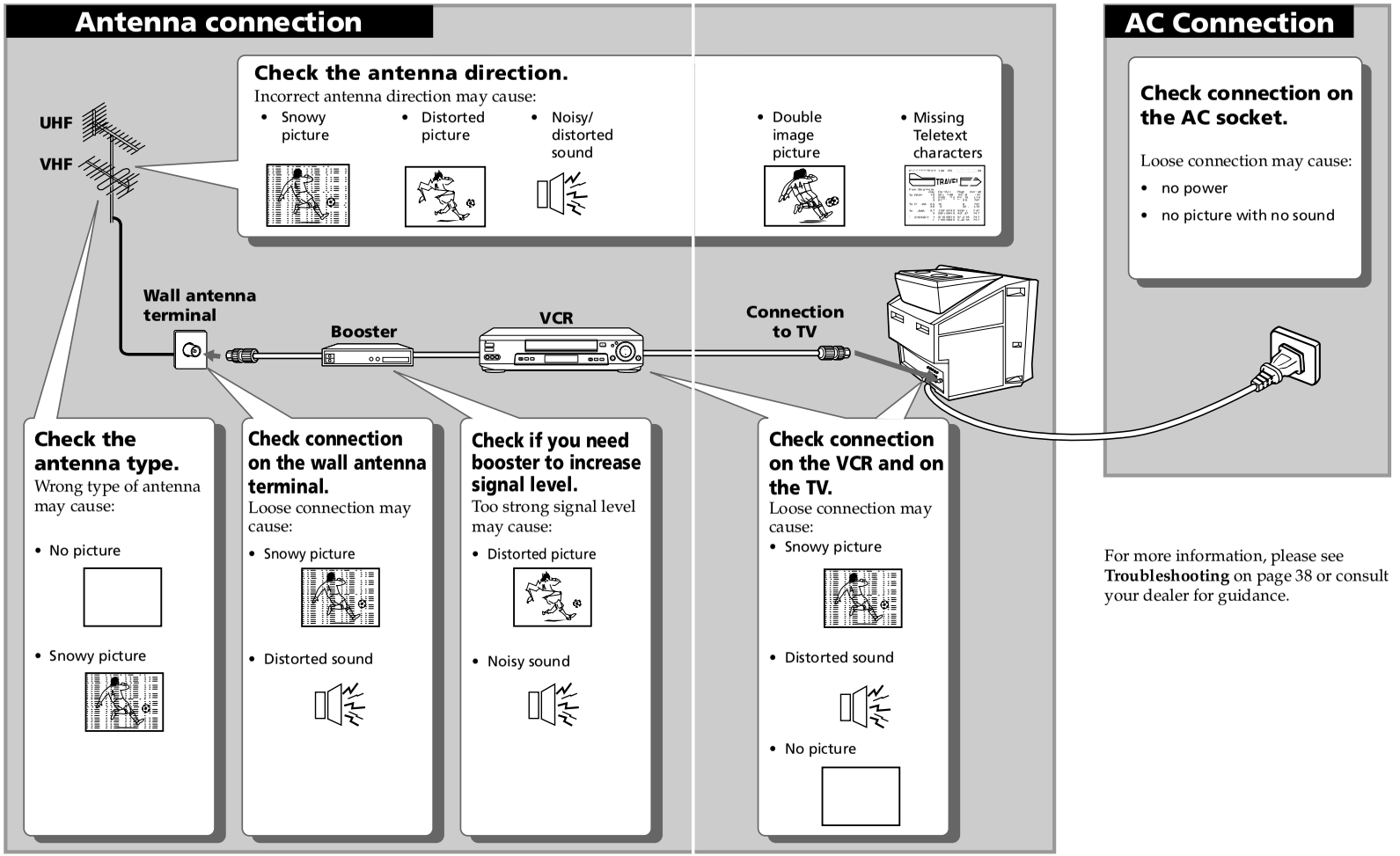
Troubleshooting Shortcuts
(KV-EX29M65 only)

For better viewing, please check the following connections.



For more information, please see **Troubleshooting** on page 38 or consult your dealer for guidance.

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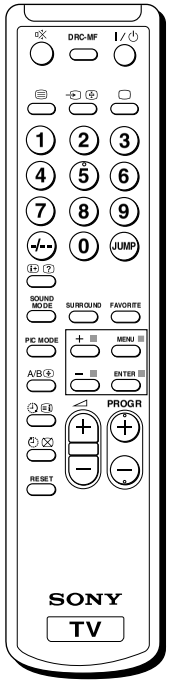
Remote control



The names/symbols of buttons on the remote are indicated in different colors to represent the available functions.

Label color	Button function
White	For general TV operations
Green	For Teletext operations

Button	Function	Page
I/⏻	Turn off temporarily or turn on the TV.	11
PROGR +/–	Select program number.	11
0 – 9, -/--	Input numbers.	11
ⓘ	Display on-screen information.	12
🔇	Mute the sound.	12
▢	Display the TV program.	12
⏎	Select TV or video input.	12
◿ +/–	Adjust volume.	12
JUMP	Jump to previous channel.	12
Timer operation		
◷	Set TV to turn on automatically.	14
◷	Set TV to turn off automatically.	14
SOUND MODE	Select sound mode.	15
PIC MODE	Select picture mode.	15
DRC-MF	Select DRC-MF mode.	16
Favorite Channel operations		
FAVORITE	Display favorite channels.	17
1 – 6	Select desired channel.	17
SURROUND	Select surround mode.	18
Stereo/bilingual operations		
A/B	Select stereo/bilingual mode.	19
Teletext operations (not used for KV-EX29M93)		
☰	Display Teletext broadcast.	–
☰ⓘ	Display Teletext service contents.	–
⊜	Stop Teletext display from scrolling.	–
?	Reveal concealed information.	–
⊕	Enlarge the Teletext display.	–
⊠	Show TV screen while waiting for Teletext page.	–
0 - 9	Input Teletext page number.	–
PROGR +/–	Display the next or previous page.	–
■ (red, green, yellow, blue)	Access a FASTEXT menu.	–
Menu operations		
MENU	Display the menu.	23
+, –	Select and adjust items.	23
ENTER	Confirm selected items.	23
RESET	Set TV to factory setting.	34

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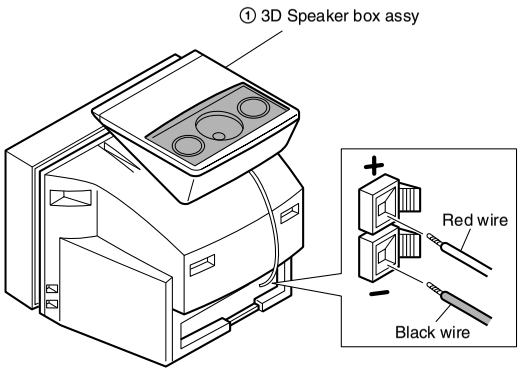
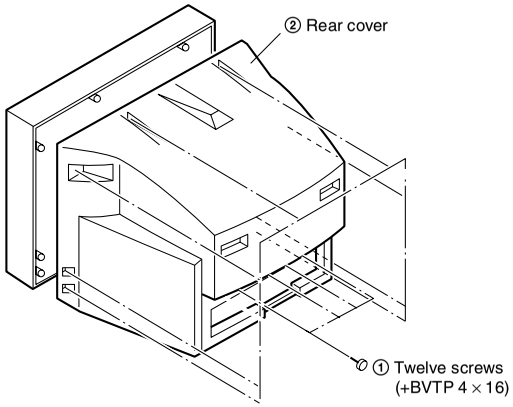
SECTION 2
DISASSEMBLY

2-1. SPEAKER BOX REMOVAL

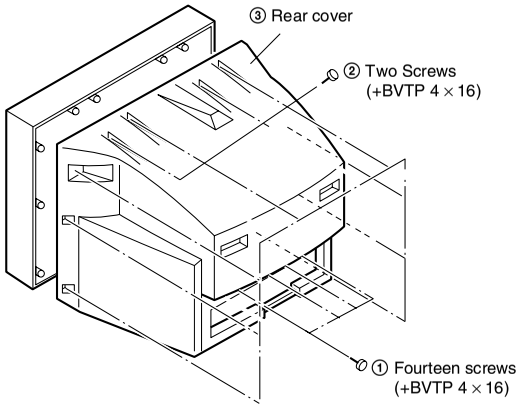


2-2. REAR COVER REMOVAL

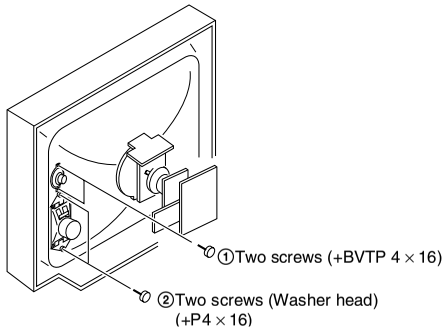
(i) KV-EX29 MODELS



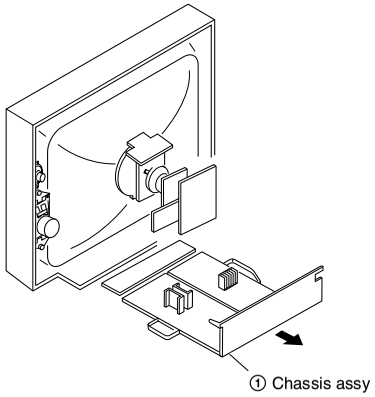
(ii) KV-EX34 MODEL



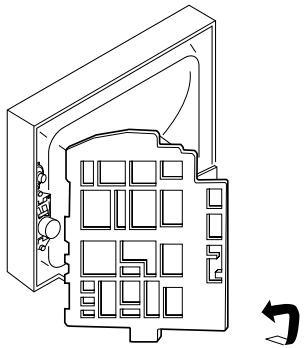
2-3. SPEAKER REMOVAL



2-4. CHASSIS ASSY REMOVAL



2-5. SERVICE POSITION



Note:

1. Disconnect the DGC connector from CN6603 (D board)
2. Disconnect Lead Assy Speaker (R) from Relay.
3. Undress necessary wires that creates tension while placing the chassis into Service Position.

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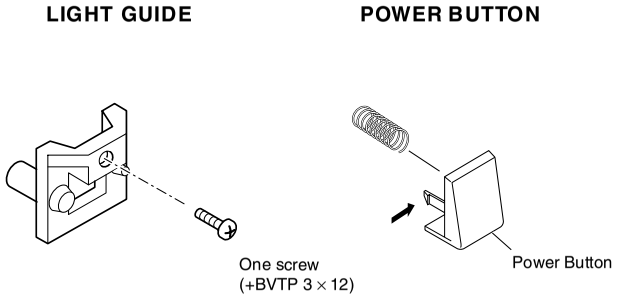
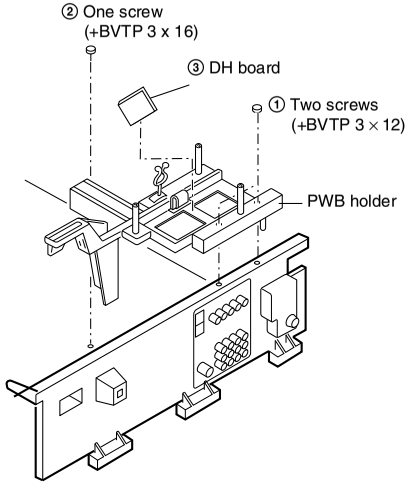
2-6. REPLACEMENT OF PARTS

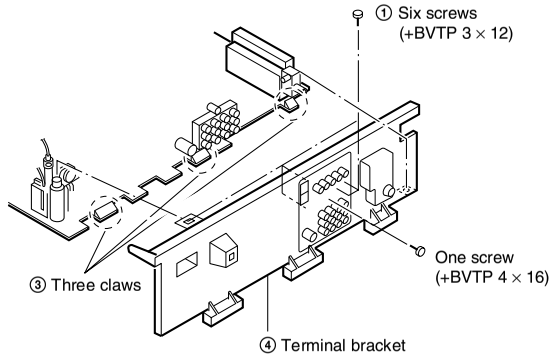
For Power Button removal, push the claw in the direction of the arrow and remove.



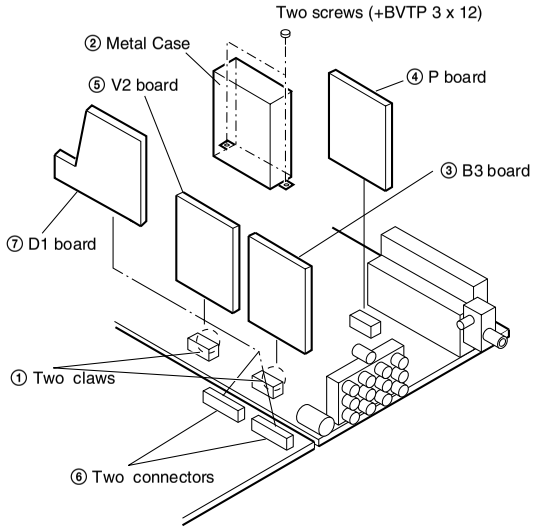
2-7. PWB AND DH BOARD REMOVALS



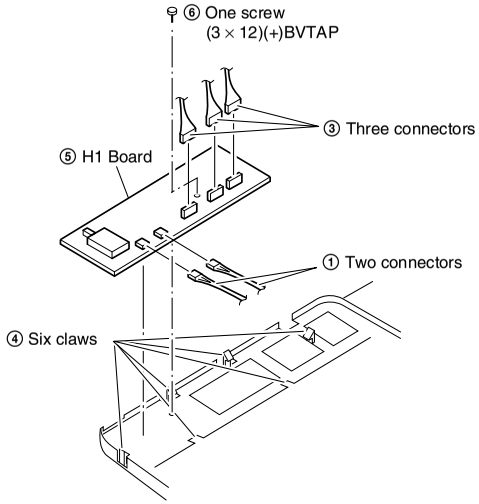
2-8. TERMINAL BRACKET REMOVAL



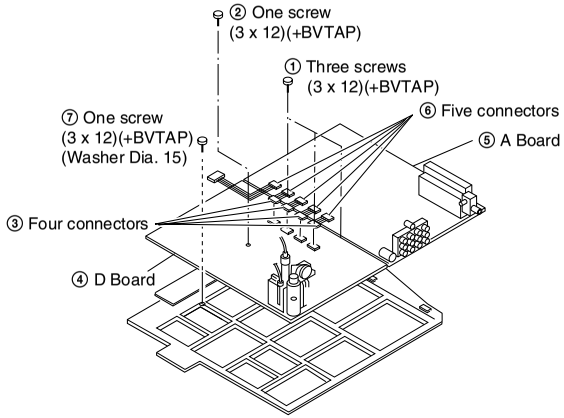
2-9. B3, P (KV-EX29M39/M87, EX34M97 ONLY), V2 (KV-EX29M39/M65 ONLY) AND D1 BOARDS REMOVAL



2-10. H1 BOARD REMOVAL



2-11. A AND D BOARDS REMOVAL



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2-12. PICTURE TUBE REMOVAL

Note:

i) The picture tube for OCE model is upside-down, and the position for the anode-cap and springs are changed accordingly. (KV-EX29M39 (OCE) ONLY)

ii) When removing the Nut, Locking; first make sure to hold the Nut, special CRT with a spanner while opening the Nut, Locking using a torque driver. Then proceed to remove the Nut, special CRT using a torque driver.

iii) Remove all the necessary CRT supports located on top left and right, bottom left and right prior to removing the CRT.

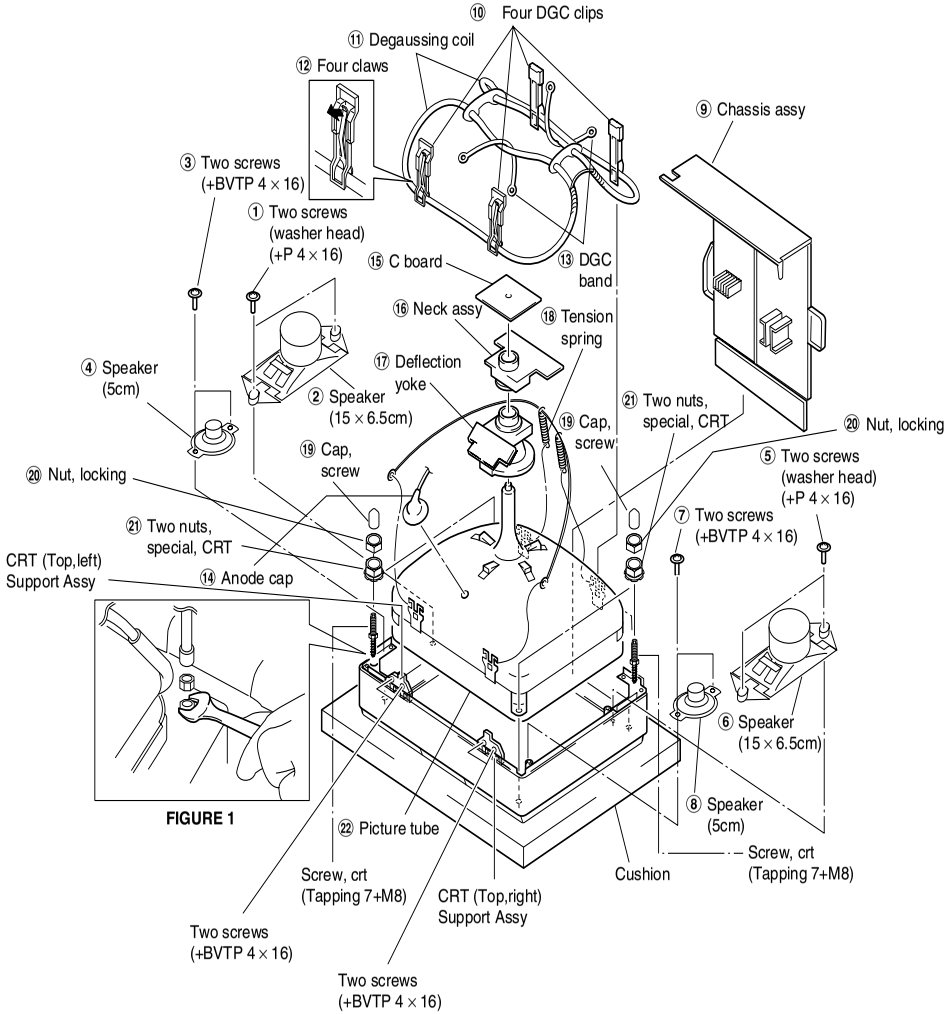
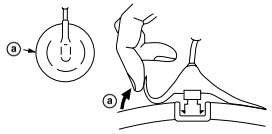

⑩ Four DGC clips
⑪ Degaussing coil
⑫ Four claws
⑨ Chassis assy
③ Two screws (+BVTP 4 × 16)
① Two screws (washer head) (+P 4 × 16)
⑬ DGC band
⑮ C board
⑯ Neck assy
⑱ Tension spring
④ Speaker (5cm)
⑰ Deflection yoke
② Speaker (15 × 6.5cm)
⑲ Cap, screw
㉑ Two nuts, special, CRT
⑳ Nut, locking
⑤ Two screws (washer head) (+P 4 × 16)
⑦ Two screws (+BVTP 4 × 16)
CRT (Top,left) Support Assy
⑭ Anode cap
⑥ Speaker (15 × 6.5cm)
⑧ Speaker (5cm)
㉒ Picture tube
Screw, crt (Tapping 7+M8)
Cushion
Screw, crt (Tapping 7+M8)
CRT (Top,right) Support Assy
Two screws (+BVTP 4 × 16)
Two screws (+BVTP 4 × 16)

FIGURE 1

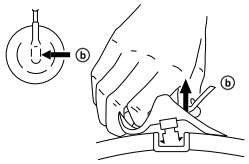
• REMOVAL OF ANODE-CAP

NOTE : After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

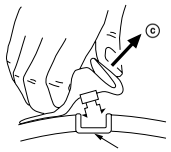
• REMOVING PROCEDURES



① **Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.**



② **Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.**



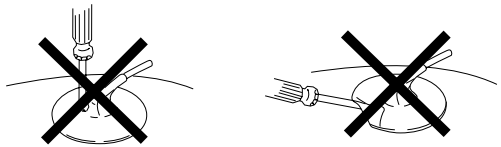
③ **When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.**

• HOW TO HANDLE AN ANODE-CAP

① **Do not damage the surface of anode-caps with sharp shaped objects.**

② **Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.**

③ **Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or damage the rubber.**

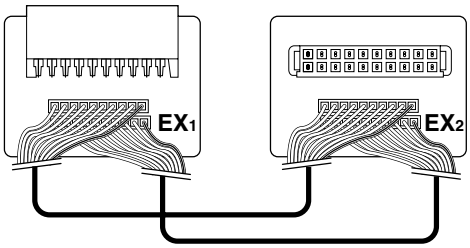


SECTION 3
SERVICE JIG

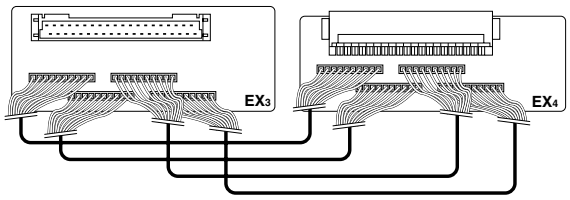
3-1. JIGS REQUIRED FOR SERVICING

REF NO.	DESCRIPTION	QUANTITY	PART NO.	REMARK
J-1	TOOL (20P), SERVICE	1	3-702-763-01	For A to V2 board extension For A to P board extension
J-2	TOOL (40P), SERVICE	1	3-702-764-01	For B3 to A board extension
J-3	TOOL (30P), SERVICE	2	3-702-773-01	For D to D1 board extension

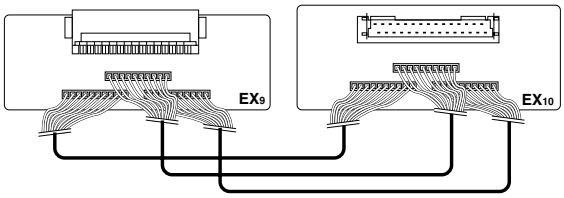
J-1



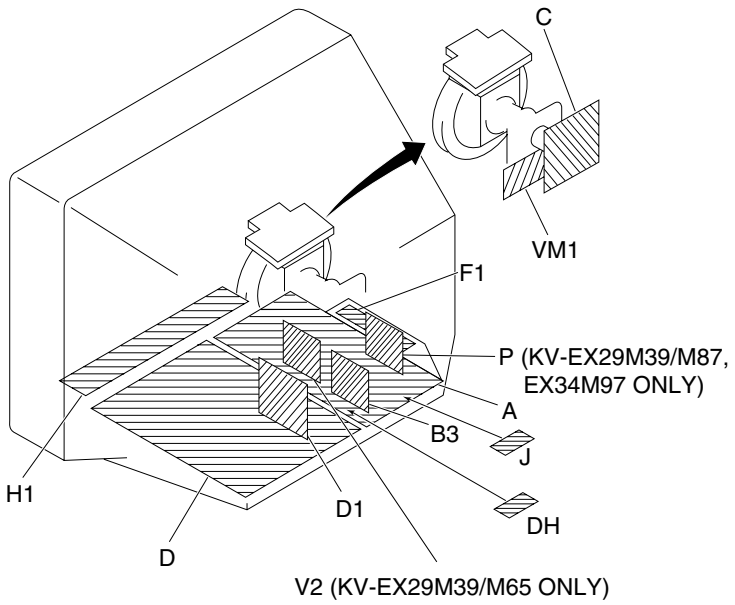
J-2



J-3



SECTION 4
CIRCUIT BOARDS LOCATION



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SECTION 5
ADVANCE OPERATION

5-1. "RESET" FUNCTION

1. Purpose

If a customer faces some setting problem that cannot be solved, using the "RESET" function some items will be reset to its original setting (shipping condition)

2. How to Operate

There are 2 ways to access to the "RESET" Function:-

a) By pressing "RESET" button on the Remote Commander.
b) By pressing "MENU" button or "SELECT" button (for non-menu models) on the Front Key Input and hold it down for 5 seconds.

3. Subsequent of Operation

Sequential to the resetting operation (either methods being used in No. 2), TV set would shut down once and automatically turn on again. The power-off duration is expected to be about 500msec. An OSD message, "RESET" tentatively will be displayed for 10 sec after IK status gets stable.
As a result, some items will be reset to an initial condition (shipment condition) wheareas some other remains at the last selection by user.

Items that remains at the last selection by user

Program No., Favourite CH Setup, PIC rotation, OSD Language, Fine tuning, TV System, Skip

Reset Items

Video input	RF	Color system(RF)	AUTO*
Volume	30	Antenna sensitivity	HIGH* (KV-EX29M39/M87, EX34M97 ONLY)
DRC-MF	DRC1250		
Picture mode	DYNAMIC	Stereo mode	STEREO/NICAM* (EXCEPT KV-EX29M87)
Sound mode	DYNAMIC	Bilingual mode	MAIN* (EXCEPT KV-EX29M87)
Surround mode	OF	High-deviation mode	AUTO*
Color system(video)	AUTO	Child lock	OFF*
Multi picture(PIP)	OFF (KV-EX29M39/M87, EX34M97 ONLY)	Wide mode	OFF
PIP position	Bottom-right (KV-EX29M39/M87, EX34M97 ONLY)	Game mode	OFF
Favourite CH mode	AUTO	Teletext mode	OFF (KV-EX29M39/M65 ONLY)
OSD recall	OFF	Sleep timer	OFF
Intelligent volume	OFF	Wake-up timer	OFF
ECO mode	OFF	Sound muting	OFF

*= only when in RF mode

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SECTION 6
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switches should be set as follows unless otherwise noted:

PICTURE control ..... normal
BRIGHTNESS control ..... normal

Perform the adjustments in the following order :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

Preparation :

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

6-1. BEAM LANDING

1. Input a white signal with the pattern generator.
   Contrast, Brightness } normal
2. Position neck assy as shown in Fig6-1.
3. Set the pattern generator raster signal to a green raster.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 6-1 through 6-3.)
5. Move the deflection yoke forward and adjust so that the entire screen is green. (See Figure 6-2.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws and DY spacers.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 6-4.)

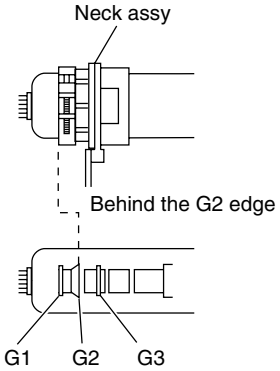

Fig. 6-1

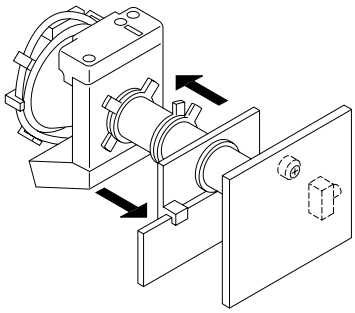

Fig. 6-2

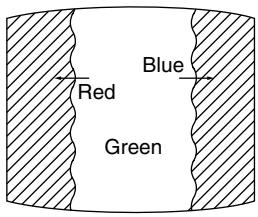

Fig. 6-3

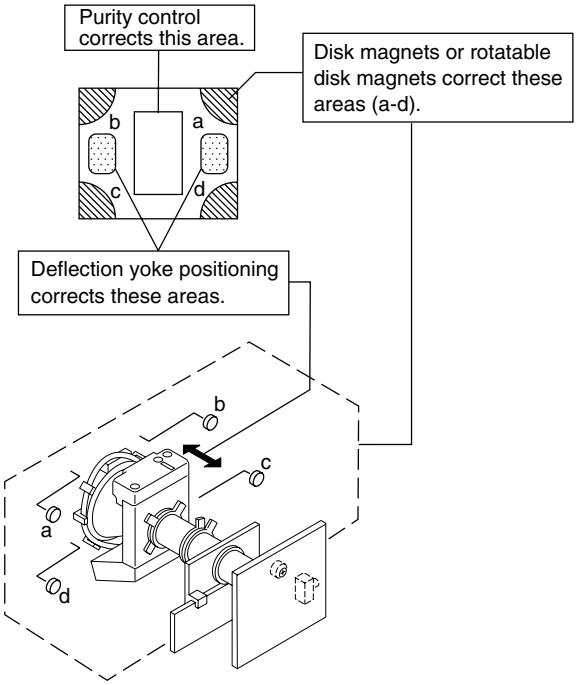

Fig. 6-4

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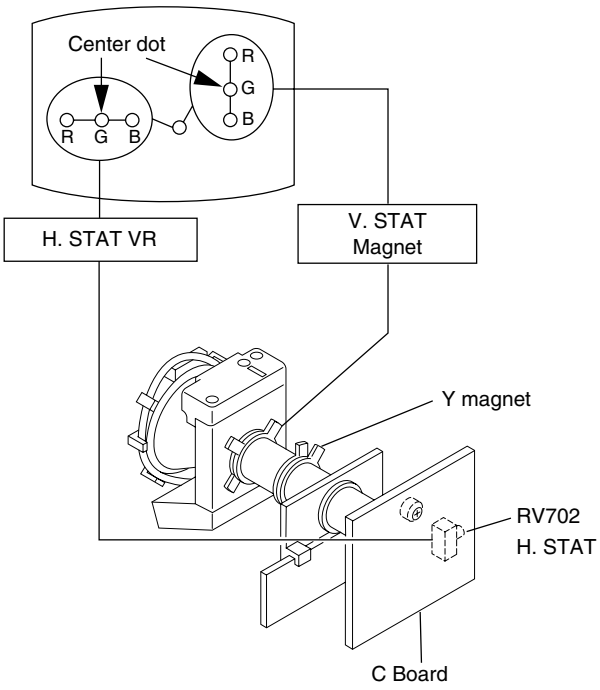
6-2. CONVERGENCE ADJUSTMENT

Preparation :

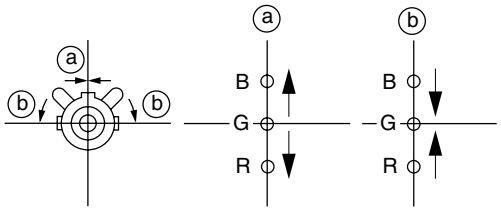
- Before starting this adjustment, adjust the focus, horizontal size and vertical size.
- Set the PICTURE 70% and BRIGHTNESS 0%.
- Cross hatch / Dot pattern.

(1) Horizontal and Vertical Static Convergence

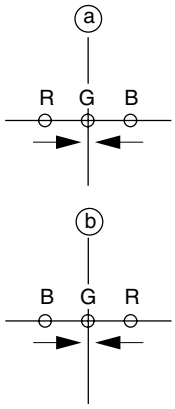


1. (Moving horizontally), adjust the H.STAT control so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
3. Adjust Horizontal Trapezoid with “DAC 04 HTR” in Service Mode to make H-Trapezoid distortion best.
4. If the H.STAT variable resistor cannot bring the red, green and blue dots together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other, so be sure to perform adjustments while tracking.)

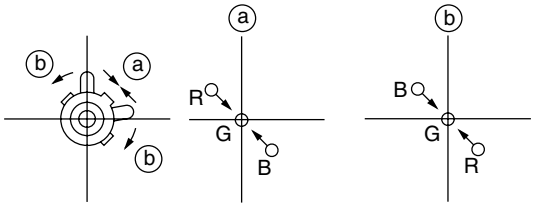
① V. STAT

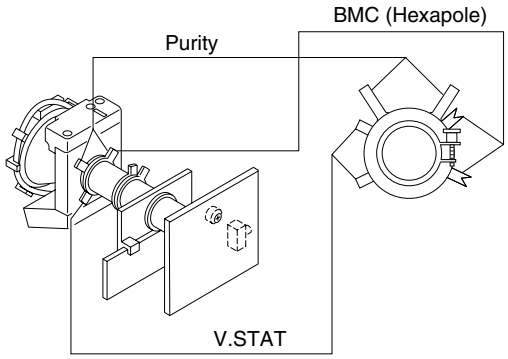


② H. STAT VR



③





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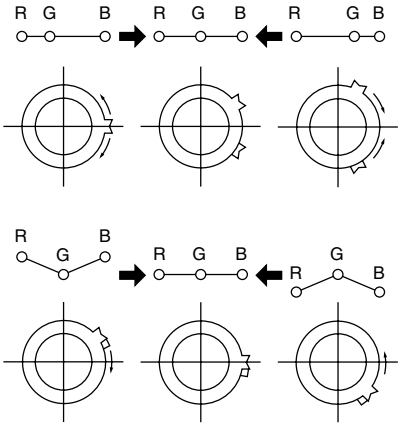
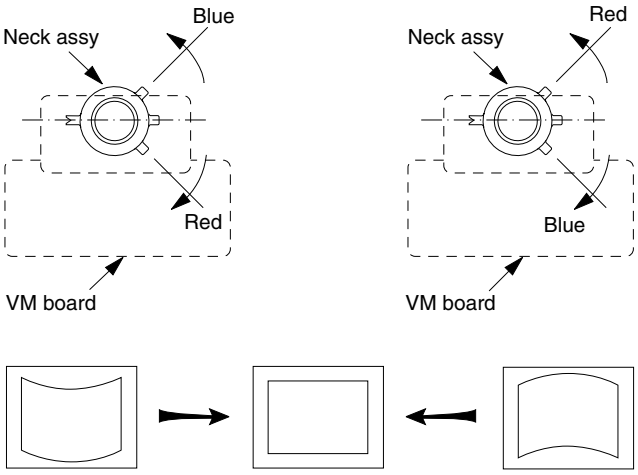
④ BMC (Hexapole) Magnet.
If the red, green and blue dots are not balanced or aligned, then use the BMC magnet to adjust in the manner described below.



⑤ Y separation axis correction magnet adjustment.

1. Receive the cross-hatch signal and adjust [PICTURE] to [MIN] and [BRIGHTNESS] to [STANDARD] .

2. Adjust the Y separation axis correction magnet on the neck assembly so that the horizontal lines at the top and bottom of the screen are straight.



Note

1. The Red and Blue magnets should be equally far from the horizontal center line.
2. Do not separate the Red and Blue magnets too far. (Less than 8 mm)

(2) Dynamic Convergence Adjustment

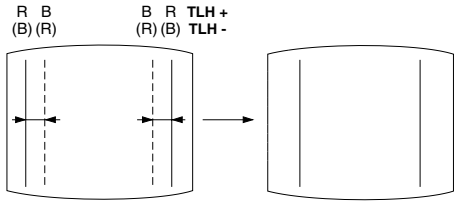
Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence
- Set the PICTURE and BRIGHTNESS to normal.

1. Adjust TLH. (TLH convergence piece)

① Receive the dot/hatch pattern signal and adjust picture quality by the menu.

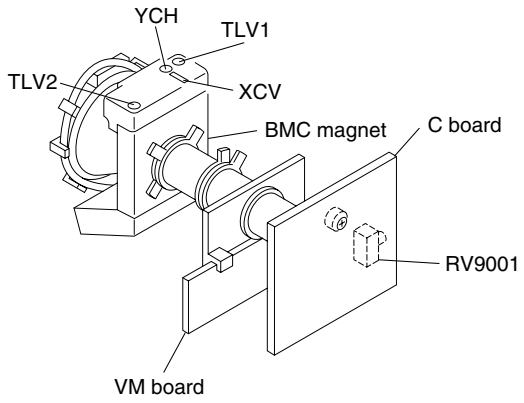
② Correct horizontal mis-convergence of red and blue of both sides on the X axis.
When red is outside insert TLH convergence piece to right side (TLH +) views from DY neck. And when blue is outside, insert it to left side (TLH –) and take both sides.



2. Adjust XCV core.
To able to become balance of XCV on the X axis well.

3. Adjust V-TILT.
Correct the vertical mis-convergence of red and blue of vertically sides on the Y axis.

4. Adjust YCH.
Adjust horizontal mis-convergence of red and blue of vertically sides on the Y axis. Mentioned above steps 2 to 4 are adjusting respectively perform minuteness tracking.



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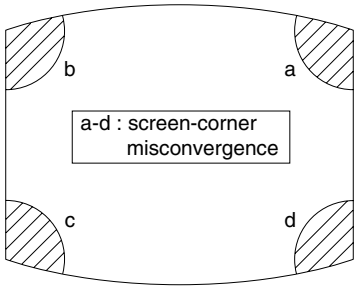
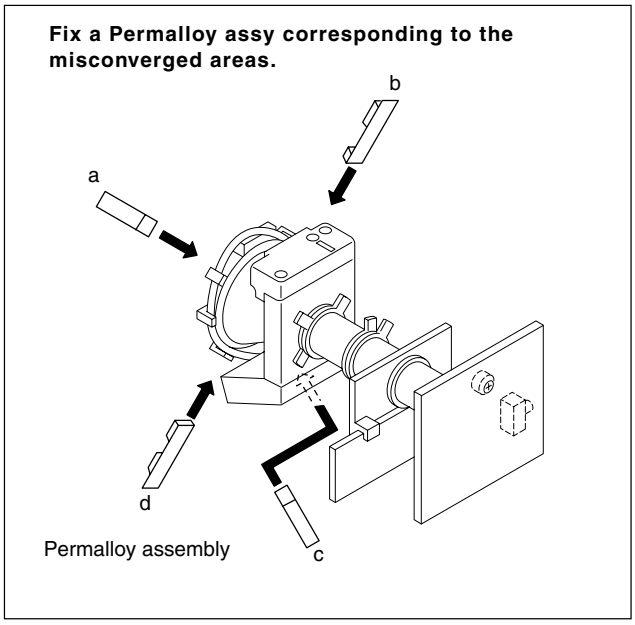
(3) Screen-corner Convergence



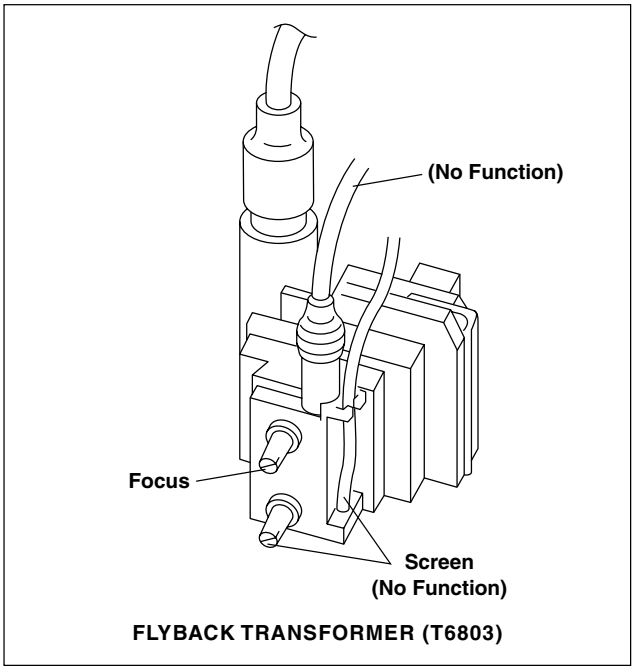


6-3. FOCUS ADJUSTMENT

Note

Focus adjustment should be completed before W/B adjustment.

(1) Receive digital monoscope pattern.
(2) Set "A/V CONTROL" to "STANDARD".
(3) Adjust FOCUS VR so that the center of the screen becomes just focus.
(4) Change the receiving signal to white pattern and blue back.
(5) Confirm MAGENTA RING is not noticeable. In case MAGENTA RING is obvious, adjust FOCUS VR to balance between MAGENTA RING and FOCUS adjustment.



6-4. NECK ASSY TWIST ADJUSTMENT

(1) Receive dot/hatch pattern DRC-MF, DRC1250, DYNAMIC.
(2) Turn FOCUS VR fully counter-clockwise.
(3) Confirm the dot shape at the screen center. (Fig. 6-4)
(4) Resume FOCUS VR.

Note

In case of turning NECK ASSY, loosen the screw 3 turns. Do not move the position.

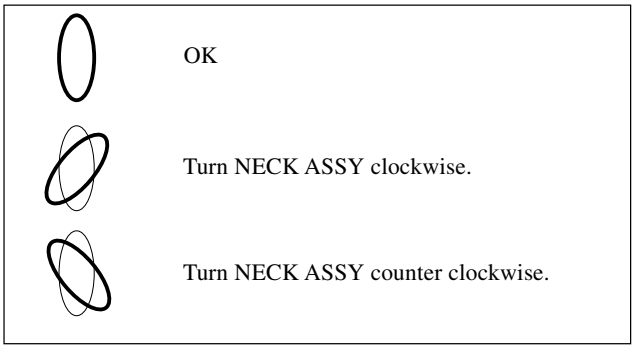


Fig. 6-4

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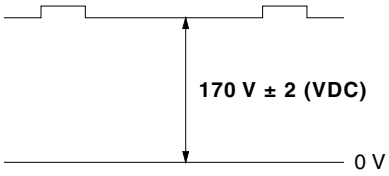
6-5. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT

1) Set the PICTURE and BRIGHTNESS to normal.
2) Put to VIDEO input mode without signals.
3) Connect R, G and B of the C board cathode to the oscilloscope.
4) Adjust BRIGHTNESS to obtain the cathode voltage to the value below.
5) Whilst watching the picture, adjust the screen VR [RV9002] located on the C board to the point just before the retrace lines disappear (to the point before cut-off)



2. WHITE BALANCE ADJUSTMENT

1) Set to Service Mode (Refer Section 7-1: ADJUSTMENTS WITH COMMANDER).
2) Input white raster signal.
3) Set the following condition.
   PICTURE minimum, BRIGHTNESS 50%
4) Select GCT (WHB 7) and BCT (WHB 8) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
5) Set the PICTURE to maximum.
6) Select GDR (WHB 4) and BDR (WHB 5) with [1] and [4], and adjust the level with [3] and [6] for the best white balance.
7) Write into the memory by pressing [MUTING] then [0].

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SECTION 7
CIRCUIT ADJUSTMENTS

7-1. ADJUSTMENTS WITH COMMANDER

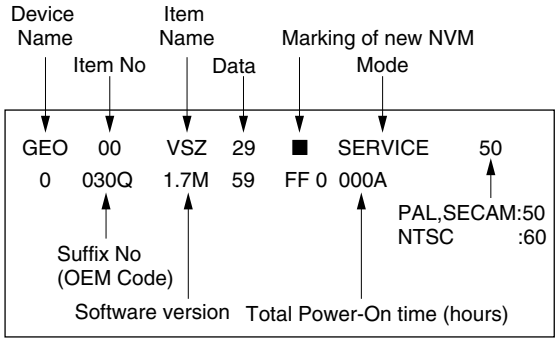
Service adjustments to this model can be performed using the supplied Remote Commander RM-963 and RM-964.

a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

The screen display is :



b. CANCELLATION OF SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1) Set to Service Mode.
2) Press [1] (UP) and [4] (DOWN), to select the adjustment item Name.
3) Press [3] or [6] to raise/lower the data value.
4) Press [MUTING] button to indicate WRITE on the screen.
5) Press [0] button to write into memory.

d. OTHER FUNCTION VIA REMOTE COMMANDER

[7], [0]	All the data becomes the values in memory.
[8], [0]	All goes to the standard state.
[5], [0]	Service data initialization (Be sure not to use usually.)
[DISPLAY], [0]	Write 50Hz adjustment data to 60Hz, or vice versa.
[2], [0]	Copy and write all data.
[Cursor +/–]	Skip category (device) to caategory (device)

example : GEO 00 VSZ
↕
DAC 00 HCT

e. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again to confirm adjustments were made.

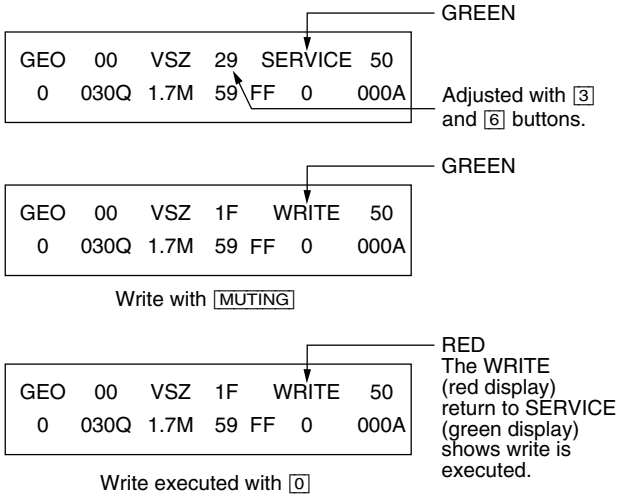
7-2. ADJUSTMENT METHOD

Item Number 00 of device GEO

This explanation uses V-size as an example.

1. Select “GEO 00 VSZ” with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 1F for PAL reception.)
4. Press [MUTING] button to indicateWRITE on screen. (The display from SERVICE (green display) to WRITE (green display).
5. Execute the writing with the [0] button. (The WRITE display changes to red color while executing and then back to SERVICE (green display).
6. The WRITE execution is completed.

Example on screen display :-


GREEN
GEO 00 VSZ 29 SERVICE 50
0 030Q 1.7M 59 FF 0 000A
Adjusted with [3] and [6] buttons.
GREEN
GEO 00 VSZ 1F WRITE 50
0 030Q 1.7M 59 FF 0 000A
Write with [MUTING]
RED
The WRITE (red display) return to SERVICE (green display) shows write is executed.
GEO 00 VSZ 1F WRITE 50
0 030Q 1.7M 59 FF 0 000A
Write executed with [0]

Use the same method for all Items.

Note : 1. In [WRITE], the data for all items are written into memory together.
2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function							Device Name
						50			60			
Category	No.	Name				50	50NC	50VC	60	60 NC	60VC	
GEO	00	VSZ	21	3F	V SIZE		1A	1A		1C	1C	CXA2100AQ
	01	VPS	27	3F	V POSITION		25	25		22	22	
	02	VLN	5	0F	V LINEARITY		06	06		06	06	
	03	SCO	0A	0F	S CORRECTION		09	09		09	09	
	04	HSZ	1E	3F	H SIZE		1E	1E		1B	1B	
	05	HPS	2F	3F	H POSITION		24	22		1B	1A	
	06	PAP	28	3F	PIN AMP		2D	2F		30	33	
	07	UPN	25	3F	UPPER CORNER PIN		**24**	28		26	29	
	08	LPN	23	3F	LOWER CORNER PIN		23	26		24	27	
	09	TRZ	0C	0F	TRAPEZIUM		0B	0B		0A	0A	
	0A	AGL	0A	0F	AFC ANGLE		09	09		09	09	
	0B	BOW	6	0F	AFC BOW		0A	0A		0A	0A	
	0C	**LBL**	12	3F	LEFT H BLANKING		16	16		21	21	
	0D	**RBL**	2C	3F	RIGHT H BLANKING		1B	1B		1C	1C	
	0E	**MPN**	0	3	MIDDLE PIN DISTORTION COMPENSATION		00	00		00	00	
	0F	**UVL**	0	0F	UPPER V LINEARITY	00			00			
	10	**LVL**	0	0F	LOWER V LINEARITY	00			00			
	11	**HCP**	0	3	HORIZONTAL HIGH VOLTAGE COMPENSATION		00	00		00	00	
	12	**VCP**	1	3	VERTICAL HIGH VOLTAGE COMPENSATION		00	00		00	00	
	13	VAS	2F	3F	V ASPECT		**2F**	2D		**2F**	2D	
	14	VSC	1F	3F	V SCROLL	1F	**1F**	1D	1F	**1F**	1E	
	15	**USC**	0	1	UNDER-SCAN MODE ON/OFF		00	01		00	01	
	16	**VBW**	0	3	V BLANKING WIDTH CONTROL		00	02		00	00	
	17	**AT1**	2	3	AKB REFERENCE TIMING		02	01		02	00	
	18	CPY	0	1	COPY THE GEO DATA TO ALL 50/60HZ NVM AREA							

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function										Device Name
						50			60			Eco Mode			
Category	No.	Name				50	50NC	50VC	60	60NC	60VC	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
DAC	00	HCT	33	FF	H CENTER	CC			CC							MB88141
	01	HLN	27	3F	H LINEARITY		2B	2B		2D	2D					
	02	MDP	26	3F	MIDDLE PIN		**1F**	**1F**		**1F**	**1F**					
	03	CCP	37	3F	LOWER CORNER PIN		**10**	**04**		**10**	**04**					
	04	HTR	26	3F	HORIZONTAL TRAPEZIUM		1F	1F		1F	1F					
	05	PBA	1F	3F	PIN UNBALANCE		16	16		16	16					
	06	**DPH**	1F	3F	DF PHASE		1F	1F		1F	1F					
	07	**QPH**	19	3F	QP PHASE		19	19		19	19					
	08	**QAC**	23	3F	QP AMPLITUDE		23	23		23	23					
	09	**QDC**	20	3F	QP DC LEVEL		20	20		20	20					
	0A	**QDV**	1F	3F	QP V MODULATION		1F	1F		1E	1E					
	0B	**QAV**	1A	3F	QP AMPLTUDE MODULATION		1A	1A		1D	1D					
	0C	**ABC**	0	FF	ABL D/A CONTROL							00	00	7E	7E	
	0D	CPY	0	1	COPY THE DAC DATA TO ALL 50/60Hz NVM AREA											

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
WHB	00	**CBO**	7	0F	DC OFFSET CANCELLER FOR Cb1	0A	CXA2100QA
	01	**CRO**	7	0F	DC OFFSET CANCELLER FOR Cr1	0A	
	02	SBR	18	3F	SUB BRIGHTNESS CONTROL	1F	
	03	**RDR**	29	3F	R DRIVE	29	
	04	GDR	25	3F	G DRIVE	24	
	05	BDR	26	3F	B DRIVE	25	
	06	**RCT**	24	3F	R CUTOFF	24	
	07	GCT	12	3F	G CUTOFF	06	
	08	BCT	31	3F	B CUTOFF	25	
	09	**SBO**	29	3F	SUB BRIGHTNESS OFFSET	20	
	0A	**RDO**	1F	3F	R DRIVE OFFSET	1F	
	0B	**GDO**	1A	3F	G DRIVE OFFSET	1A	
	0C	**BDO**	1A	3F	B DRIVE OFFSET	1B	
	0D	**RCO**	1F	3F	R CUTOFF OFFSET	1F	
	0E	**GCO**	1E	3F	G CUTOFF OFFSET	22	
	0F	**BCO**	15	3F	B CUTOFF OFFSET	16	

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	50	60	50			60			Picture Mode				Eco Mode				Device Name
Category	No.	Name							TV	Video	DVD	TV	Video	DVD	Dynamic	Standard/ Drama	Hi-Fine/ Soft	Personal	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
SAJ	00	**PIC**	3F	3F	PICTURE CONTROL										3F	32	28						CXA2100AQ
	01	**BRT**	1F	3F	BRIGHTNESS CONTROL										23	1F	1B						
	02	**COL**	27	3F	COLOR CONTROL										2B	1F	1F						
	03	**HUE**	1F	3F	HUE CONTROL										1F	1F	1F						
	04	**SHP**	24	3F	SHARPNESS CONTROL										22	1F	1D						
	05	**VML**	3	3	VM LEVEL										03	02	01	02					
	06	**DYC**	1	1	DYNAMIC COLOR ON/OFF										01	01	00	01					
	07	**CTM**	0	1	COLOR TEMPERATURE FOR DYNAMIC COLOR										00	00	00	00					
	08	**CAX**	2	3	COLOR MATRIX SPECIFICATION		02	00															
	09	**GMA**	3	3	GAMMA CORRECTION										02	02	03	02					
	0A	**DCT**	1	3	DC TRANMISSION CONTROL										01	01	00	01					
	0B	**DPL**	1	3	AUTO PEDESTAL LEVEL CONTROL										02	01	00	01					
	0C	**ABM**	0	3	ABL MODE CONTROL										01	00	00	00					
	0D	**ABT**	0	3	ABL CURRENT DETECTION Vth CONTROL														02	00	02	00	
	0E	**CLO**	9	0F	COLOR OFFSET				09	08		09	09										
	0F	**CLW**	3	7	COLOR STEP WIDTH TO THE CHANGE OF S/N	03																	
	10	**HUO**	9	0F	HUE OFFSET				08	08		09	09										
	11	**SHO**	7	1F	SHARPNESS OFFSET				0F	14	0F	09	0F	0F									
	12	**SHW**	1	7	SHARPNESS STEP WIDTH TO THE CHANGE OF S/N	01																	
	13	**BRO**	7	0F	BRIGHTNESS OFFSET														07	07	07	07	

TVG	Functionality		Initial	Range	Function	Common	50			60			Picture Mode				Eco Mode				Device Name
Category	No.	Name					TV	Video	DVD	TV	Video	DVD	Dynamic	Standard/ Drama	Hi-Fine/ Soft	Personal	Eco OnNC	Eco OffNC	Eco ONVC	Eco OffVC	
JGL	00	**PON**	1	1	RGB AND AKB REFERENCE PULSE OUTPUT ON/OFF	01															CXA2100AQ
	01	**RGB**	7	7	RGB OUTPUT SELECTION	07															
	02	**AGG**	0	3	AGING MODE SELECTION	00															
	03	**DPS**	0	1	Y/C DELAY LINE PASS MODE SWITCH	00															
	04	**BBT**	3	3	RGB BOTTOM LIMITTER CONTROL	03															
	05	**LML**	0	3	RGB AMPLITUDE LIMITTER CONTROL	00															
	06	**PAB**	0F	0F	DC LEVEL FOR PEAK ABL	0F															
	07	**SCO**	0C	0F	SUB PICTURE CONTROL	07															
	08	**LV2**	7	0F	RBG LEVEL FOR RGB2	07															
	09	**SFO**	1	1	SHARPNESS CIRCUIT F0		01	01	01	01	01	01									
	0A	**PRO**	0	3	PRE/OVER-SHOOT RATIO CONTROL		00	03	03	03	03	03									
	0B	**LT1**	2	3	LUMINANCE TRANSIENT IMPROVEMENT								02	02	00	02					
	0C	**CT1**	1	3	CHROMINANCE TRANSIENT IMPROVEMENT								01	01	00	01					

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	50/60Hz		Device Name
Category	No.	Name					TV	Video	
PIP	00	**PRO**	0	1	PROGRESSIVE SCAN MODE ENABLE	00			SDA9489X
	01	**RED**	0	1	READ DOUBLE MODE	00			
	02	**FEI**	0	3	FIELD SELECT	00			
	03	**HPS**	35	FF	HORIZONTAL PICTURE POSITSION	33			
	04	**VPS**	1B	FF	VERTICAL PICTURE POSITION	1B			
	05	**HFP**	0	0F	HORIZONTAL FINE POSITIONING	08			
	06	**VFP**	0	0F	VERTICAL FINE POSITIONING	00			
	07	**DIS**	0	3	DISPLAY STANDARD	00			
	08	**HOS**	0	3	HORIZONTAL SIZE	00			
	09	**VES**	0	3	VERTICAL SIZE	00			
	0A	**FPS**	0	3	FORCE PARENT STANDARD	00			
	0B	**HZM**	0	7	HORIZONTAL ZOOM	00			
	0C	**VSP**	0	1	VERTICAL SYNC PULSE NOISE REDUCTION	01			
	0D	**VDL**	0	1F	VERTICAL SYNC PULSE DELAY	00			
	0E	**FRH**	5	7	FRAME WIDTH HORIZONTAL	05			
	0F	**FMV**	2	3	FRAME WIDTH VERTICAL	02			
	10	**VRD**	0	1	REDUCTION	00			
	11	**VBK**	0	1	VERTICAL BLANKING	00			
	12	**DLY**	0	F	SELECT DELAY	01			
	13	**PCR**	0	1	POSITION CORRECTION	00			
	14	**AGM**	3	3	AGC MODE	03			
	15	**AGC**	6	F	AUTOMATIC GAIN CONTROL VALUE	0B			
	16	**CVB**	0	3	CVBS SELECT	00			
	17	**CPD**	1	3	CLAMPING DURATION	01			
	18	**CPT**	1	3	CLAMPPING PULSE START	01			
	19	**LUM**	0	3	LUMINANCE OFFSET	00			
	1A	**PLL**	0	3	INSERT PLL TIME CONSTANT		00	00	
	1B	**YCD**	2	F	Y/C DELAY	08			
	1C	**NSR**	0	3	NOISE REDUCTION FOR INSERT PLL		02	00	
	1D	**LSP**	0	1	STANDARD IDENTIFICATION SPEED	00			
	1E	**KIL**	0	3	COLOR KILLER TRESHOLD	02			
	1F	**BGP**	0	1	BURST GATE POSITION	01			
	20	**SEC**	0	1	SECAM IDENTIFICATION LEVEL	01			
	21	**DEM**	1	3	DEEMPHASIS SELECTION	01			
	22	**CMA**	0	3	CHROMA BANDWITH	00			
	23	**IFC**	2	3	IF COMPENSATION FILTER	02			
	24	**HUE**	0	1F	HUE	00			
	25	**SCA**	7	1F	COLOR SUBCARRIER ADJUSTMENT	06			
	26	**CON**	0	F	CONTRAST ADJUSTMENT	00			
	27	**BLR**	0	F	BLANKING LEVEL RED CHANNEL	00			
	28	**BRT**	0	F	BRIGHTNESS ADJUSTMENT	00			
	29	**BLG**	0	F	BLANKING LEVEL GREEN CHANNEL	00			
	2A	**BIR**	0	1	BLANKING INVERSION RED CHANNEL	00			
	2B	**BIB**	0	1	BLANKING INVERSION BLUE CHANNEL	00			
	2C	**BLB**	0	F	BLANKING LEVEL BLUE CHANNEL	00			
	2D	**INT**	0	1	REFRESH INTERVAL	00			
	2E	**PKR**	4F	FF	PEAK LEVEL RED CHANNEL	85			
	2F	**PKG**	4F	FF	PEAK LEVEL GREEN CHANNEL	85			
	30	**PKB**	4F	FF	PEAK LEVEL BLUE CHANNEL	09			
	31	**FRY**	A	F	FRAME COLOR Y	01			
	32	**OUT**	1	1	OUTPUT FORMAT	00			
	33	**FRU**	0	F	FRAME COLOR U	00			
	34	**FRV**	0	F	FRAME COLOR V	00			
	35	**SAT**	7	F	COLOR SATURATION ADJUSTMENT	07			
	36	**YPK**	7	7	Y PEAK ADJUSTMENT	03			
	37	**YCO**	0	F	Y CORING ENABLE	00			
	38	PAL	3	3	PAL ID LEVEL	03			
	39	POV	0	7	POSITION OFFSET VERTICAL	00			
	3A	POH	0	1F	POSITION OFFSET HORIZONTAL	00			
	3B	**VSH**	0	1F	VERTICAL SHRINK	00			
	3C	**HSH**	0	1F	H SHRINK	00			
	3D	**CPL**	1	3	CLAMPING PULSE LENGTH	01			

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Multi Comb	3D Comb	S-Input	Other	TV	Video	DVD	TV		Video		DVD		Device Name
Category	No.	Name												50	60	50	60	50	60	
YCT	00	**TNT**	1F	3F	TINT ADJUSTMENT FOR NTSC						1F	1F								CXA2123Q
	01	**PNG**	1	1	PAL/NTSC GATE WIDTH	01														
	02	**PNI**	0	1	PAL/NTSC SENSITIVITY SW	00														
	03	SCL	7	0F	SUB COLOR CONTROL									05	04	07	07			
	04	SCT	8	0F	SUB CONTRAST CONTROL									07	07	07	07			
	05	**SFO**	2	3	SHARPNESS CENTER FREQUENCY CHANGING	02														
	06	**SEQ**	3	3	SHARPNESS EQUALIZER CHARACTERISTIC	03														
	07	**SHG**	5	0F	SHARPNESS GAIN CONTROL									05	05	05	06	07	07	
	08	**YOL**	1F	3F	Y-OUTPUT LEVEL CONTROL	1F														
	09	**BSP**	0	3	BLACK STRETCH START POINT CHANGING	00														
	0A	COL	1F	3F	Cb/Cr OUTPUT LEVEL CONTROL	1A														
	0B	**DCR**	0	3	DC RESTORATION RATIO ADJUSTMENT	00														
	0C	**BFO**	1	3	BPF/TQF F0 ADJUSTMENT	01														
	0D	**BFQ**	2	3	BPF/TQF Q ADJUSTMENT	02														
	0E	**FSW**	1	1	BPF/TQF SWITCH	01														
	0F	**SDT**	1	1	SECAM DOUBLE TRAP SWITCH	01														
	10	**LPF**	1	1	Y/Cb/Cr LPF SWITCH	01														
	11	**YDL**	6	0F	Y-DL TIME ADJUSTMENT		07	05	06	06										
	12	**CMT**	0	1	Cb/Cr OUTPUT MUTE SWITCH	00														
	13	**BO1**	7	0F	Cb OFFSET 1 ADJUSTMNET (MAIN ROUTE)	07														
	14	**RO1**	7	0F	Cr OFFSET 1 ADJUSTMENT	07														
	15	**CDF**	0	7	V COUNT DOWN FREQUENCY SWITCH	00														
	16	**CDM**	0	3	V COUNT DOWN JUDGE SWITCH	00														
	17	**AFC**	0	3	AFC SENSITIVITY SWITCH							00	00							
	18	**MVM**	1	1	MACROVISION MASK + AFC MASK	01														
	19	**SRY**	7	0F	SECAM R-Y BLACK ADJUSTMENT	07														
	1A	**SBY**	1	0F	SECAM B-Y BLACK ADJUSTMENT	01														
	1B	**BEL**	2	3	SECAM BELL/HPF SWITCHING	02														
	1C	**BLF**	0	1	BELL F0 ADJUSTMENT	00														
	1D	**SV1**	0	1	SECAM V-ID SWITCH	00														
	1E	**SGP**	0	3	SECAM GATE POSITION ADJUSTMENT	00														
	1F	**SID**	1	1	SECAM SENSITIVITY SWITCH	01														
	20	**SIH**	0	1	SECAM INHIBITION SWITCH	00														
	21	**STP**	0	1	Y BLACK LEVEL SETUP FOR PAL PLUS	00														
	22	**ASW**	2	1	AUTO VIDEO SELECT MODE SW	01														
	23	**WSH**	0	3	SHARPNESS GAIN STEP FOR NOISE REDUCTION	00														
	24	**WCO**	0	3	Cb/Cr OUTPUT LEVEL STEP FOR NOISE REDUCTION	00														
	25	**CB2**	7	7	Cb2 OFFSET ADJUSTMENT (YCbCr2 INPUT)	07														
	26	**CR2**	7	7	Cr2 OFFSET ADJUSTMENT (YCbCr2 INPUT)	07														
	27	**HPH**	0	1	HS OUTPUT PHASE SWITCH	00														
	28	**VPH**	0	0	SWITCH FOR VP OUTPUT PHASE	00														
	29	**NCM**	0	1	NTSC COMB	01														

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Dynamic	Standard/Drama	Hi-Fine/Soft	Personal	Device Name
Category	No.	Name									
AP	00	**BAS**	13	1F	BASE SOUND MODE CONTROL		12	10	10		BH3868FS
	01	**TRE**	12	1F	TREBLE SOUND MODE CONTROL		12	12	10		
	02	**BBE**	99	FF	BBE SOUND MODE CONTROL		97	D5	00		
	03	**SON**	0	1	SURROUND ON/OFF	00					
	04	**SST**	0	1	SURROUND STEREO	00					
	05	**SMO**	0	1	SURROUND MONORAL	00					
	06	**LOP**	0	1	SURROUND EFFECT ENHANCEER	00					
	07	**SUR**	0	7	SURROUND EFFECT	00					

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
MSP	00	**WST**	15	FF	W/G STEREO THRESHOLD	15	MPS3415D
	01	**WBT**	EA	FF	W/G BILINGUAL THRESHOLD	EC	
	02	**WLL**	5	FF	W/G MONAURAL THRESHOLD	05	
	03	**WAC**	1	OF	W/G AGREEMENT COUNT	01	
	04	**WDL**	30	FF	W/G SEARCH DELAY	30	
	05	**NDL**	20	FF	NICAM SEARCH DELAY	20	
	06	**SDL**	10	FF	STEREO STATUS READ DELAY	10	
	07	**AGC**	1	1	AGC SWITCH AUTO/CONSTANT	01	
	08	**REL**	28	3F	AGC GAIN AT CONSTANT MODE	28	
	09	**CRM**	0	1	CARRIER MUTING ON/OFF	00	
	0A	**ACO**	1	1	AUDIO CLOCK OUT ON/OFF	01	
	0B	**FP**	1B	7F	FM PRESCALE FOR NON-M SYSTEM	1B	
	0C	**FPM**	32	7F	FM PRESCALE FOR M SYSTEM	32	
	0D	**FH**	2D	7F	FM PRESCALE FOR HDEV	36	
	0E	**FHM**	65	7F	FM PRESCALE FOR HDEV AND M	65	
	0F	**WGP**	1C	7F	W/G PRESCALE	1C	
	10	**NIP**	7F	7F	NICAM PRESCALE	7F	
	11	**ERR**	50	FF	AUTO FM SWITCH THRESHOLD	50	

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	TV	Video	Picture Mode				Device Name
Category	No.	Name							Dynamic	Standard/Drama	Hi-Fine/soft	Personal	
LT1	00	**LDH**	1	1	HISTOGRAM SEGMENT SELECTION	01							TDA9178
	01	**CFS**	1	1	CONTOUR FILTER SELECTION	01							
	02	**WLB**	0	1	LETTERBOX WINDOW SWITCH	00							
	03	**VDC**	1	1	VIDEO DEPENDANT CORING				01	01	01	01	
	04	**DEM**	0	1	DEMONSTRATION MODE	00							
	05	**CDP**	4	07	LUMINANCE DELAY	04							
	06	**OSP**	0	1	OVERRULE SMART PEAKING	00							
	07	**WPO**	0	1	WHITE POINT STRETCH OFF	00							
	08	**DSK**	0	1	SKIN TONE SWITCH				00	00	00	00	
	09	**ASK**	0	1	SKIN TONE ANGLE SELECTION	00							
	0A	**WSK**	0	1	SKIN TONE WIDTH SELECTION	00							
	0B	**SSK**	0	1	SKIN TONE SIZE SELECTION	00							
	0C	**DGR**	1	1	GREEN ENHANCEMENT SWITCH				01	01	00	01	
	0D	**DGT**	7	7	THRESHOLD OF GREEN ENHANCEMENT SWITCH	07							
	0E	**GGR**	0	1	GREEN ENHANCEMENT GAIN	00							
	0F	**WGR**	0	1	GREEN ENHANCEMENT WIDTH	00							
	10	**SGR**	0	1	GREEN ENHANCEMENT SIZE	00							
	11	**DBL**	0	1	BLUE STRETCH SWITCH	00							
	12	**GBL**	0	1	BLUE STRETCH GAIN SELECTION	00							
	13	**SBL**	0	1	BLUE STRETCH SIZE SELECTION	00							
	14	**CDS**	1	1	COLOR DEPENDANT SHARPNESS				01	01	00	01	
	15	**CST**	7	7	THRESHOLD OF COLOR DEPENDANT SHARPNESS	07							
	16	**CT1**	0	1	COLOR TRANSIENT IMPROVEMENT				00	00	00	00	
	17	**BON**	0	1	BLACK OFFSET COMPENSATION				00	00	00	00	
	18	**BTD**	0	3F	ADAPTIVE BLACK STRETCH				00	00	00	00	
	19	**NLD**	15	3F	NON-LINEARITY AMPLIFIER				15	15	00	15	
	1A	**NLW**	7	7	STEP WIDTH OF NON-LINEARITY AMPLIFIER	07							
	1B	**VGD**	15	3F	VARIABLE GAMMA				1F	1F	1F	1F	
	1C	**VGW**	0	7	STEP WIDTH OF VARIABLE GAMMA	00							
	1D	**PKD**	3F	3F	PEAKING AMPLITUDE				3F	3F	3F	3F	
	1E	**PKW**	8	0F	STEP WIDTH OF PEAKING AMPLITUDE	08							
	1F	**SPD**	0	3F	STEEPNESS CORRECTION				20	00	00	00	
	20	**CRD**	11	3F	CORING LEVEL				1B	1B	00	1B	
	21	**CRW**	9	0F	STEP WITH CORING LEVEL	09							
	22	**CRO**	0	0F	CORING LEVEL OFFSET FOR VIDEO MODE	09							
	23	**LWD**	1F	3F	LINE WIDTH CORRECTION	1F							
	24	**SNM**	0	7	S/N MODE UNDER UNRELIABLE S/N CONDITION	00							
	25	**SNC**	3	OF	S/N RATIO AVERAGE COUNTER		03	03					
	26	**FMC**	2	OF	FEATURE MODE MATCHING COUNTER	02							

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
DRC	00	**MOD**	0	3	DRC MODE (FOR EVALUATION ONLY) 00-NORMAL, 01-FORCED 1250I, 02-FORCED PROGRESSIVE, 03-FORCED SIMPLE PROGRESSIVE	00	

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	TV	Video	NR Mode				Picture Mode				Device Name
Category	No.	Name							NR mode 0	NR mode 1	NR mode 2	NR mode 3	Dynamic	Standard/Drama	Hi-Fine/soft	Personal	
3CM	00	**FRZ**	0	1	EXTERNAL MEMORY TEST BIT	00											UPD64082
	01	**NRM**	0	3	NOISE REDUCTION OPERATION MODE	00											
	02	**YCO**	0E	0F	Y/C SIGNAL OUTPUT SELECTION	0D											
	03	**SYC**	1	3	SYSTEM CLOCK SELECTION	01											
	04	**STD**	0	3	STANDARD/NON-STANDARD OPERATION SELECTION	00											
	05	**MSS**	0	3	INTER-FRAME/INTER-LINE OPERATION SELECTION	00											
	06	**KIL**	3	3	KILLER/NON-KILLER OPERATION SELECTION	03											
	07	**EAD**	0	1	EXTERNAL Y-ADC SWITCH	00											
	08	**ECS**	1	3	EXTERNAL C-SYNC INPUT SELECTION	01											
	09	**CPP**	2	3	ADC INPUT LEVEL & CLUMP PULSE WIDTH SELECTION	02											
	0A	**PWR**	0	1	ADC INPUT WIDTH SWITCH	00											
	0B	**HDP**	5	7	HORIZONTAL PHASE ADJUSTMENT	05											
	0C	**CDL**	4	7	C-SIGNAL DELAY ADJUSTMENT	04											
	0D	**DYC**	2	0F	DY DETECTION CORING LEVEL ADJUSTMENT				02	02	02	04					
	0E	**DYG**	0A	0F	DY DETECTION GAIN ADJUSTMENT				0A	0A	0A	0A					
	0F	**DCC**	5	0F	DC DETECTION CORING LEVEL ADJUSTMENT				05	03	03	05					
	10	**DCG**	5	0F	DC DETECTION GAIN ADJUSTMENT				05	0A	0A	05					
	11	**YNR**	1	0F	YNR NON-LINEAR FILTER SETUP	01											
	12	**CNR**	1	0F	CNR NON-LINEAR FILTER SETUP	01											
	13	**WSC**	1	3	NOISE DETECTION CORING ADJUSTMENT	01											
	14	**VTH**	1	3	HYSTERESIS SELECTION FOR H-SYNC NON-STANDARD		01	01									
	15	**VTR**	1	3	SENSITIVITY SELECTION FOR H-SYNC NON-STANDARD		01	01									
	16	**LDR**	2	3	SENSITIVITY SELECTION FOR FRAME-SYNC NON-STANDARD		02	01									
	17	**VAP**	3	7	GAIN ADJUSTMENT FOR VERTICAL SHAPE CORRECTION								03	00	00	00	
	18	**VAI**	0C	1F	VANISHING ADJUSTMENT FOR VERTICAL SHAPE CORRECTION								0C	00	00	00	
	19	**TST**	0	1	TEST BIT	00											
	1A	**YPF**	3	3	CENTER FREQUENCY SELECTION FOR Y-PEAKING BPF								03	03	03	03	
	1B	**YPG**	8	0F	GAIN ADJUSTMENT FOR Y-PEAKING BPF								08	08	08	08	
	1C	**VSE**	OA	0F	LINE COMB FILTER SETUP	02											
	1D	**CCN**	0	1	C-SIGNAL SPLIT FILTER SWITCH	00											
	1E	**COS**	0	1	C-SIGNAL DELAY SWITCH AT NOISE REDUCTION	00											
	1F	**SDC**	0	1	DC DETECTION SENSITIVITY SWITCH	00											
	20	**SDY**	1	1	DY DETECTION LOWER-LEVEL SENSITIVITY SWITCH	01											
	21	**D2G**	4	7	D2 GAIN SELECTION	04											
	22	**YHC**	0	3	Y-SIGNAL HIGHER-LEVEL CORING SELECTION								00	00	00	00	
	23	**YHG**	0	1	Y-SIGNAL HIGHER-LEVEL GAIN SWITCH								00	00	00	00	
	24	**SHT**	0	0F	NON-STANDARD DETECTION & H/V COUNTER TEST BITS	00											
	25	**CLK**	8	0F	CLOCK TEST BITS	08											
	26	**PLL**	0D	0F	PLL FILTER SETUP	0D											
	27	**KRF**	3	0F	KILLER DETECTION REFERENCE ADJUSTMENT	03											
	28	**HSL**	0C	0F	H-SYNC SLICE LEVEL ADJUSTMENT	0C											
	29	**VSL**	8	0F	V-SYNC SLICE LEVEL ADJUSTMENT	08											
	2A	**BPS**	4	0F	INTERNAL BURST GATE START POSITION ADJUSTMENT	04											
	2B	**BPW**	0A	0F	INTERNAL BURST GATE WIDTH POSITION ADJUSTMENT	0A											
	2C	**ADC**	3	3	ADC CLOCK DELAY SELECTION	03											
	2D	**APD**	1	1	ADC POWER-DOWN SWITCH	01											
	2E	**NSD**	1	1	NON-STANDARD DETECTION TEST BIT	01											
	2F	**SPD**	2	3	MEMORY POWER-DOWN SWITCH	02											
	30	**CNT**	0	1	CNR TEST BIT	00											

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Adjustment Item Table

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
TXT	00	TXH	1	3	TELETEXT HORIZONTAL POSITION FOR PHILIPS	01	SAA5261
	01	TXV	0	7	TELETEXT VERTICAL POSITION FOR PHILIPS	07	

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
OPM	00	OSH	12	3F	OSD H POSITION	12	CXP750096
	01	FW1	0	3F	OSD ODD/EVEN FIELD WINDOW SETUP #1	00	OPTION-MISC
	02	FW2	3	3F	OSD ODD/EVEN FIELD WINDOW SETUP #2	03	
	03	**COM**	0	03	COMB OPERATION SELECTION	01	
	04	**APC**	1	1	APC SWITCH	01	
	05	**TSY**	0	03	TV SYSTEM SELECTION UNDER SEARCHING WITH AUTO TV SYSTEM	00	
	06	**MUT**	0	1	NO SIGNAL MUTE	00	
	07	**AFM**	1	1	AUTO FM SWITCH	01	
	08	TVO	3	7	V-ANGLE CORRECTION TO PICTURE ROTATION	03	
	09	DBL	0	1	DISABLE BLUEBACK FUNCTION	00	
	0A	**SSO**	1	3	SPEED CH SEARCH SELECTION	01	
	0B	TRP	0	3F	MPEG/JPEG NOISE REDUCTION FOR EACH INPUT	00	
	0C	SCH	1	7F	CH SELECTION FOR SHIPPING CONDITION	7F	
	0D	SCA	1	1	CABLE/AIR SELECTION FOR SHIPPING CONDITION	01	
	0E	VSN	0	1	ENABLE NOISE REDUCTION IN VIDEO MODE	01	
	0F	PSQ	0	1	POWER SEQ FOR CONTINUOS SIRCS DETECTION SPEC	00	

TVG	Functionality		Initial	Range	Function	Common	Device Name
Category	No.	Name					
OPB	00	OP1	E7	FF	OPTION BITS 1 (SEE THE SPECIFIED SHEET)	#	OPTION-BITS
	01	OP2	17	FF	OPTION BITS 2 (SEE THE SPECIFIED SHEET)	#	

Note:- OP1 AND OP2 "#" : SEE OPTION NOTE.

Abbreviation

VC = V-Compressed Mode NC = Non-compressed Mode ECO = Eco Mode
Sur = Surround NR = Noise Reduction

NOTE

- shaded items are fixed data.
- no data.
- Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- Note for Different Data: The data indicated in the initial colomn are the standard data values written on the microprocessor. Therefore, the data valies of the modes and stored respectively in the memory. In case of a device replacement, adjustment by rewriting the data value is necessary for some items.

OPTION NOTE

COM	Comb Operation Selection	00 = No comb used, 01 = Multi-Standard comb, 02 = 3D comb (NTSC Models only) 03 = Illegal, Do not use
TSY	TV System Selection for Auto TV System	00 = B/G, 01 = I, 10 = D/K, 11 = M
SSO	Speed CH Search Selection	00 = normal, 01 = 4 times, 10 = 6 times, 11 = 8 times
TRP	MPEG/JPEG Noise Reduction	

Input	–	–	TV	Video 1	Video 2	Video 3	Video 4	DVD

OP1 Items

Item	TOP	NICAM	HDEV	(Reserved)	Sleep Mode	DVD Input	AV Input		HEX
KV-EX29M39	1	1	1	0	1	1	1	1	EF
KV-EX29M65	0	1	1	0	1	1	1	1	6F
KV-EX29M87	0	0	0	0	1	1	1	1	0F
KV-EX29M93	0	1	1	0	1	1	1	1	6F
KV-EX34M97	0	1	1	0	1	1	1	1	6F

AV Input 00 = no AV Input, 01 = 1 AV Input, 10 = 3 AV Input, 11 = 4 AV Input

OP2 Items

Item	PiP Models	–	–	A-TV sys	–	Chinese	Arabic	Thai	HEX
KV-EX29M39	1	–	–	1	–	1	1	1	97
KV-EX29M65	0	–	–	1	–	1	1	1	17
KV-EX29M87	1	–	–	1	–	1	1	1	87
KV-EX29M93	0	–	–	1	–	1	1	1	17
KV-EX34M97	1	–	–	1	–	1	1	1	97

Pin P PiP models 0 = No PiP, 1 = PiP 0 = Original (Siemens), 1 = Chinese (Philips)
A-TV sys Auto TV System in Auto Program 0 = disabled, 1 = enabled

OSD Language (Multi)
000 = English only, 100 = English & Chinese
010 = English & Arabic 110 = English, Chinese & Arabic
001 = English & Thai 101 = English, Chinese & Thai
011 = English, Arabic & Thai 111 = English, Chinese, Arabic & Thai

NOTE

No.	Modes	Details	Entry Conditions
1.	50NC/60NC	Signal 50/60Hz Non-Compressed mode.	Input 50Hz(PAL)/60Hz(NTSC), wide mode OFF (TV/video mode)
2.	50VC/60VC	Signal 50/60Hz V-Compressed mode.	Input 50Hz(PAL)/60Hz(NTSC), wide mode ON (TV/Video mode)
3.	ECO ON/OFF NC	Eco modeON/OFF Non-Compressed mode.	ECO mode ON/OFF, wide mode OFF
4.	ECO ON/OFF VC	ECO mode ON/OFF V-Compressed mode.	ECO mode ON/OFF, wide mode ON
5.	50/60 DVD	Signal 50/60Hz Digital Video Disk	Input 50Hz(PAL)/60Hz(NTSC), DVD
6.	Multi Comb	Multi Comb Filter	Input PAL, NTSC 3.58, Service mode category OPM 03 COM 01 (Multi Model only)
7.	3D Comb	3 Dimensional Comb Filter	Input NTSC 3.58 only, Service mode category OPM 03 COM 02 (NTSC model only)
8.	S-Input	S-Video Input	Connect S-Video Cable, video mode

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7-3. PICTURE QUALITY ADJUSTMENTS

PICTURE ADJUSTMENT

1. Set to service mode.
2. Set A/V control to HI-FINE.
3. Set the following condition.

Adjustment condition

SAJ	00	PIC	3F
	06	DYC	00
	0E	CLO	06
	10	HUO	07
JGL	04	BBT	00
	05	LML	03

ECO MODE : OFF
WIDE MODE : OFF
DRC-MF : DRC1250

MEASUREMENT POINT

VR : R100 (the pin 6 of CN1100)
VB : B100 (the pin 7 of CN1100)

CAUTION
After Adjustment, these adjustment parameters must be recovered to the original condition.

Original Condition

SAJ	00	PIC	28	HI-FINE
	06	DYC	0	HI-FINE

	50 TV	50 VIDEO	60 TV	60 VIDEO
0E CLO	09	08	09	09
1O HUO	08	08	09	09

JGL	04	BBT	03	
	05	LML	00	

1. DRIVE ADJUSTMENT (VIDEO MODE)

Input signal : PAL Color bar, to Video 1
[Service] mode.

(i) SUB CONTRAST

Condition :	SAJ	00	PIC	3F
		02	COL	00
	JGL	01	RGB	04

Adjusting parameter:
YCT 08 YOL

2. DRIVE ADJUSTMENT (RF MODE)

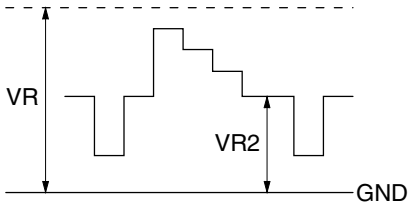
Input signal : PAL Color bar HI-FINE Mode.

(i) SUB CONTRAST

Condition :	SAJ	00	PIC	3F
		02	COL	00
	JGL	01	RGB	04

Adjusting parameter:
YCT 04 SCT

(ii) Copy SCT data to NTSC (RF MODE)



VR1 - VR2 = VR = 2.35 ± 0.07 (Vp-p)

SUB HUE/COL ADJUSTMENT

1. SUB HUE/SUB COL (VIDEO MODE)

Input signal : NTSC Color bar HI-FINE Mode.

Condition :	SAJ	02	COL	1F
	JGL	01	RGB	07
	SAJ	10	HUO	07

Adjusting parameter:

YCT	0A	COL
YCT	00	TNT

After the adjustment SAJ 10 HUO 9

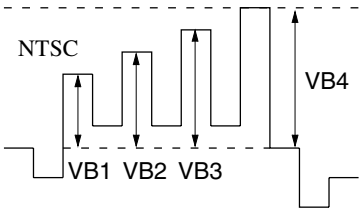
2. SUB HUE/SUB COL (NTSC RF MODE)

Input signal : NTSC Color bar.

Condition :	SAJ	02	COL	1F
	JGL	01	RGB	07
	SAJ	10	HUO	07

Adjusting parameter:

YCT	03	SCL
YCT	00	TNT



VB1 = VB4 ± 70 mV
VB2 = VB3 ± 70 mV

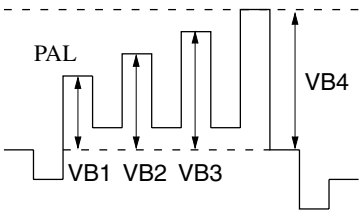
3. SUB COLOR ADJUSTMENT (PAL RF MODE)

Input signal : RF PAL Color bar HI-FINE Mode.

Condition :	SAJ	02	COL	1F
	JGL	01	RGB	07

Adjusting parameter:

YCT	03	SCL



VB1 = VB2 = VB3

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7-4. DEFLECTION ADJUSTMENTS

FOR DRC 1250 (50Hz) MODE

1. Set to Service Mode.
2. Input a Pal cross hatch/dot signal.
3. Set the following condition.
   Picture Mode to [DYNAMIC], Picture Rotation to [+/−0] and Eco Mode to OFF.
4. Set to DRC-MF1250 mode.
5. Using the [1] and [4] button, select category GEO (Service Mode).
6. Raise/lower the data using the [3] and [6] buttons.
   Select and adjust the following items to obtain optimum image.

   Service Item

GEO :	00	VSZ	V SIZE
	01	VPS	V POSITION
	02	VLN	V LINEARITY
	03	SCO	S CORRECTION
	04	HSZ	H SIZE
	06	PAP	PIN AMP
	07	UPN	UPPER CORNER PIN
	08	LPN	LOWER CORNER PIN
	09	TRZ	TRAPEZIUM
	0A	AGL	AFC ANGLE
	0B	BOW	AFC BOW

7. Using the [1] and [4] buttons select category DAC (Service Mode).
8. Select and ad List the following items to obtain optimum image. Raise/lower the data with the [3] and [6] buttons.Select and adjust the following items to obtain optimum image.

   Service Item

DAC:	01	HLN	H LINEARITY
	04	HTR	HORIZONTAL TRAPEZIUM
	05	PBA	PIN UNBALANCE

9. Select “GEO 04 HSZ” with the [1] and [4] buttons.
10. Confirm the H Size condition. If necessary, adjust the H Size to get a best condition.
11. Write into the memory by pressing [MUTING] then [0] on the remote commander.

FOR WIDE MODE, DRC1250 (50Hz)

12. Adjust condition change to WIDE MODE : ON.
13. COPY (item FOR DRC 1250 (50Hz) MODE and adjust data for the following items.

    Service Item

GEO :	00	VSZ	V SIZE
	01	VPS	V POSITION
	04	HSZ	H SIZE

14. Adjust V Blanking the following items.

    Service Item

GEO :	13	VAS	V ASPECT
	14	VSC	V SCROLL

15. Adjust the following items.

    Service Item

GEO :	02	VLN	V LINEARITY
	03	SCO	S CORRECTION
	05	HPS	H POSITION
	06	PAP	PIN AMP
	07	UPN	UPPER CORNER PIN
	08	LPN	LOWER CORNER PIN
	09	TRZ	TRAPEZIUM
	0A	AGL	AFC ANGLE
	0B	BOW	AFC BOW
DAC :	01	HLN	H LINEARITY
	04	HTR	HORIZONTAL TRAPEZIUM
	05	PBA	PIN UNBALANCE

16. Repeat step 5 and 6.

FOR DRC 1250 (60Hz) MODE

17. Input 525/60Hz signal.
18. Set to DRC-MF : 1250
19. COPY "DAC 00 HCT (DRC 1250, 50Hz)"
    to
    "DAC 00 HCT (DRC 1250, 60Hz)"
20. Adjust the Service Item listed in no. 6 and no. 8.

FOR WIDE MODE, DRC 1250 (60Hz)

21. Set to WIDE MODE : ON
22. Using the [1] and [4] buttons select category GEO (Service Mode).
23. Select and adjust the following items to obtain optimum image.
    Raise/lower the data with the [3] and [6] buttons.

GEO	00	VSZ	V SIZE
	01	VPS	V POSITION
	04	HSZ	H SIZE

24. Adjust V Blanking for the following items

GEO	13	VAS	V ASPECT
	14	VSC	V SCROLL

25. Adjust the Service Item listed in no.15.
26. Repeat step 5 and 6
27. Input a NTSC cross hatch/dot signal and repeat all above steps.

7-5. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons [5] and [0] (Data Initialize), and [2] and [0] (Data Copy) to initialize the data.
3. Call each item number and check if the respective screen shows the normal picture.
   In cases where items are not well adjusted, rectify the items with fine adjustment.
   Write the data per each item number ([MUTING] +[0]).
4. Select item numbers “OPB00” (OP1), “OPB01” (OP2) and respectively set the bit per model with command buttons [3] and [6].
5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on the shipment from the factory.
   (This will also cancel Service Mode.)

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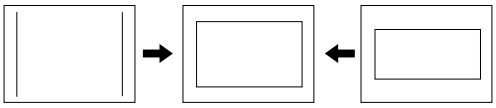
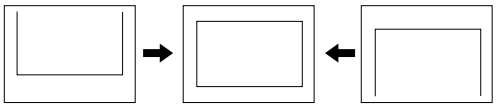
7-6. PICTURE DISTORTION ADJUSTMENT (1)

Item Number 00 – 0B

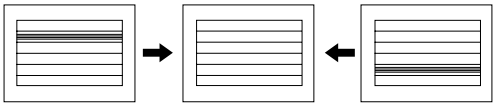
GEO 0 VSZ (V SIZE)



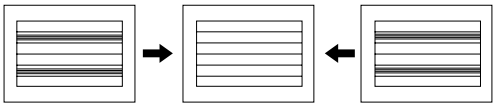
GEO 1 VPS (V POSITION)



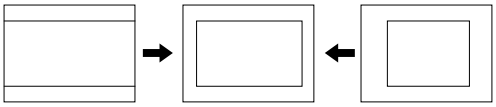
GEO 2 VLN (V LINEARITY)



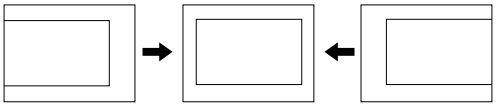
GEO 3 SCO (VERTICAL S-Correction)



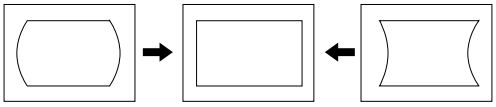
GEO 4 HSZ (H SIZE)



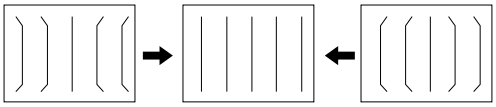
GEO 5 HPS (H POSITION)



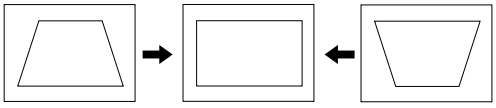
GEO 6 PAP (PIN AMP)



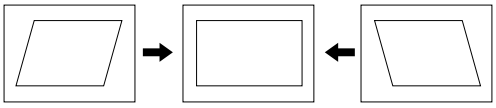
GEO 07 UPN (UPPER CORNER PIN)
GEO 08 LPN (LOWER CORNER PIN)



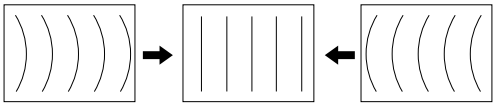
GEO 9 TRZ (TRAPEZIUM)



GEO 0A AGL (AFC.ANGLE)

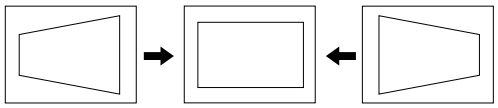


GEO 0B BOW (AFC.BOW)



PICTURE DISTORTION ADJUSTMENT (2)

H-TRAPEZOID (DAC 4 HTR)



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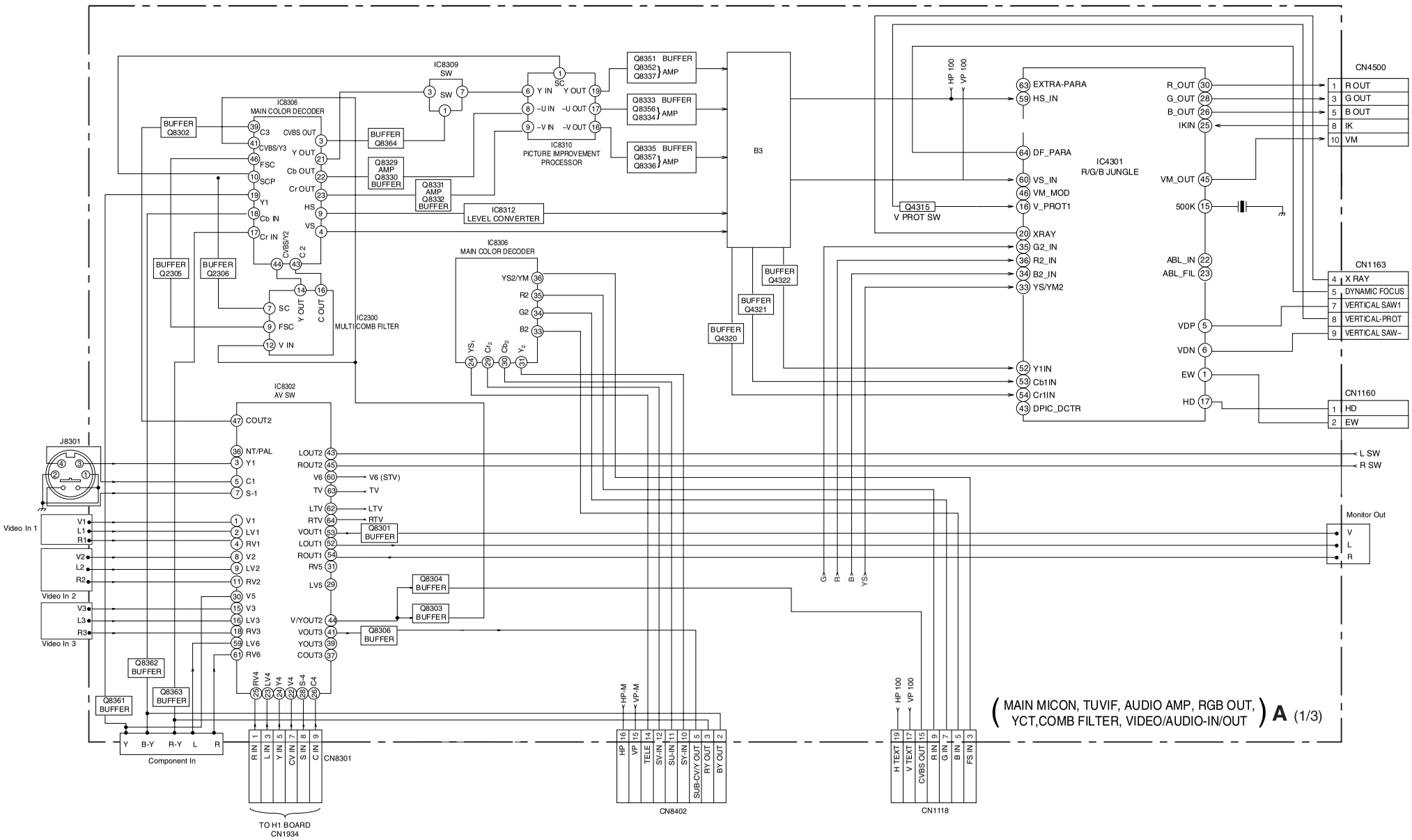
8-1. BLOCK DIAGRAM



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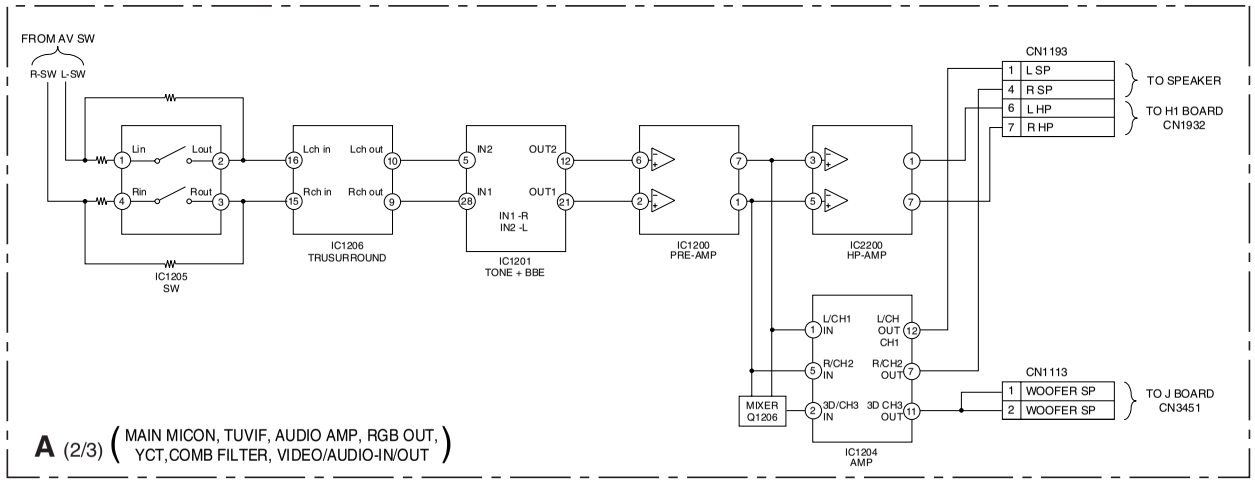

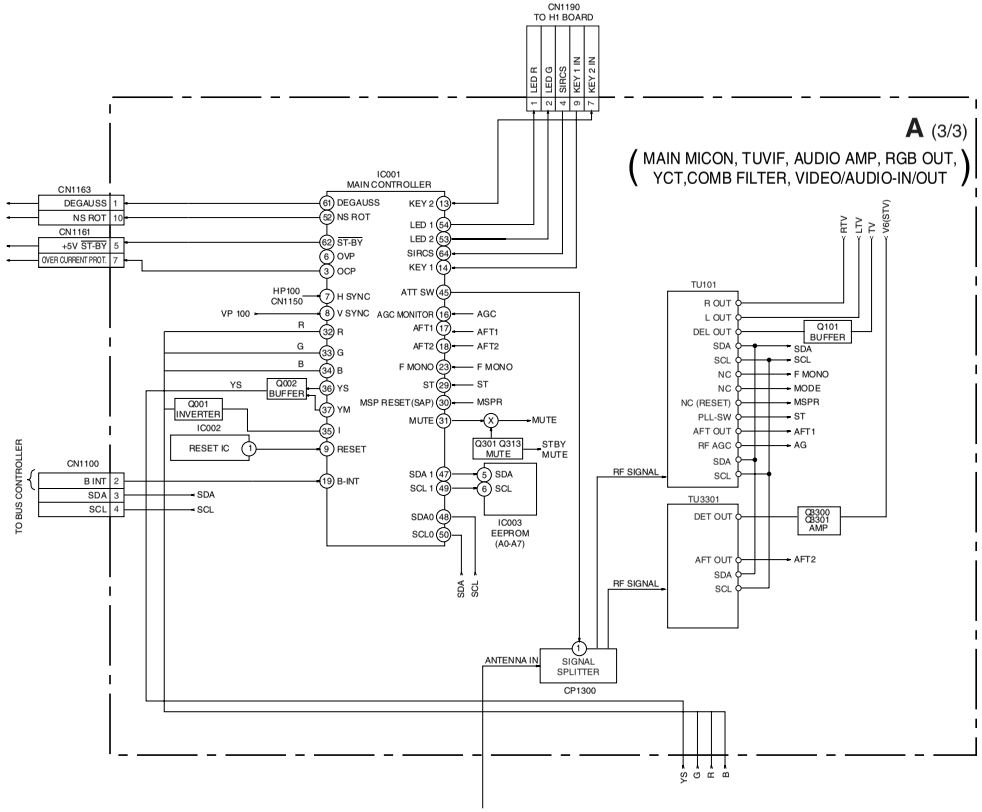

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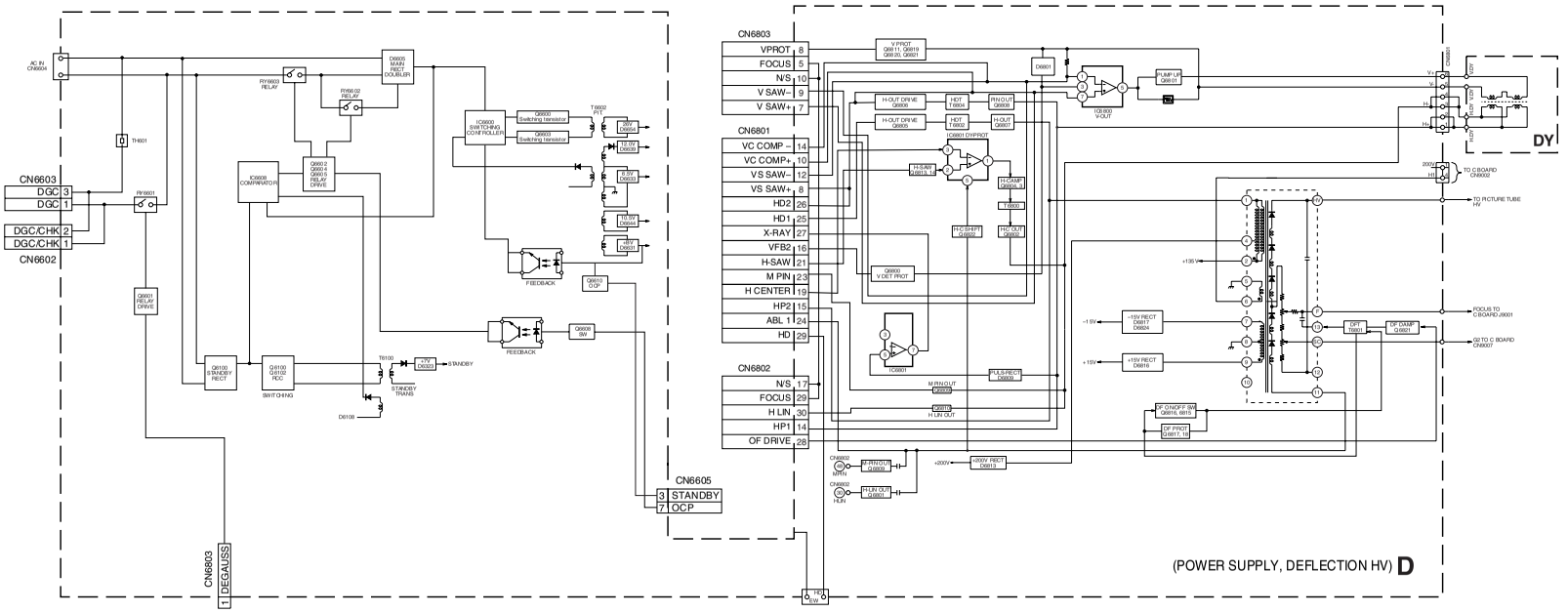

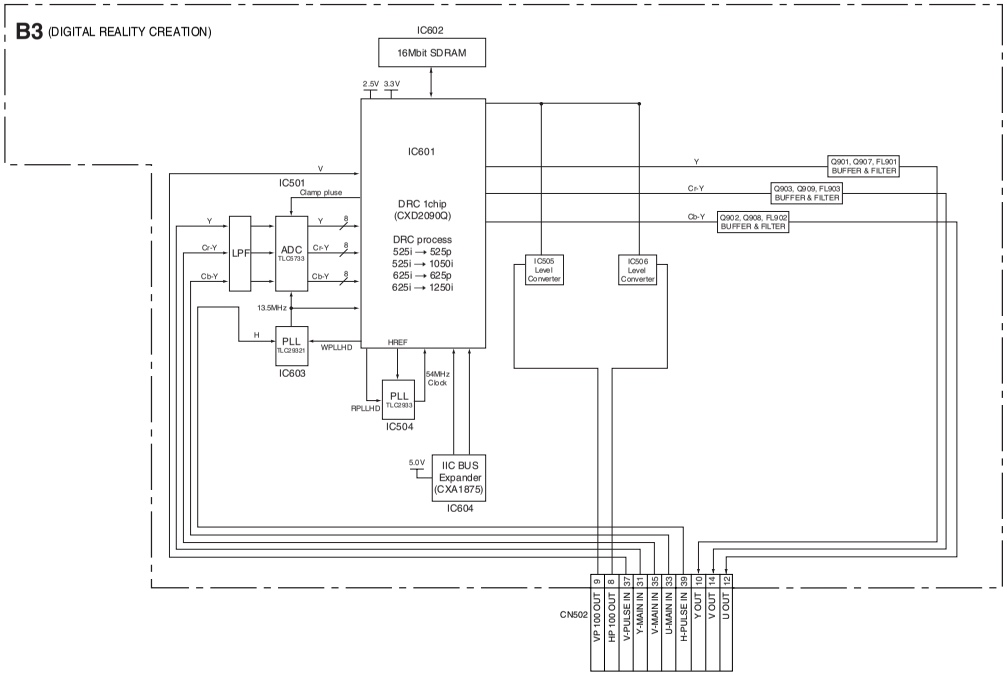

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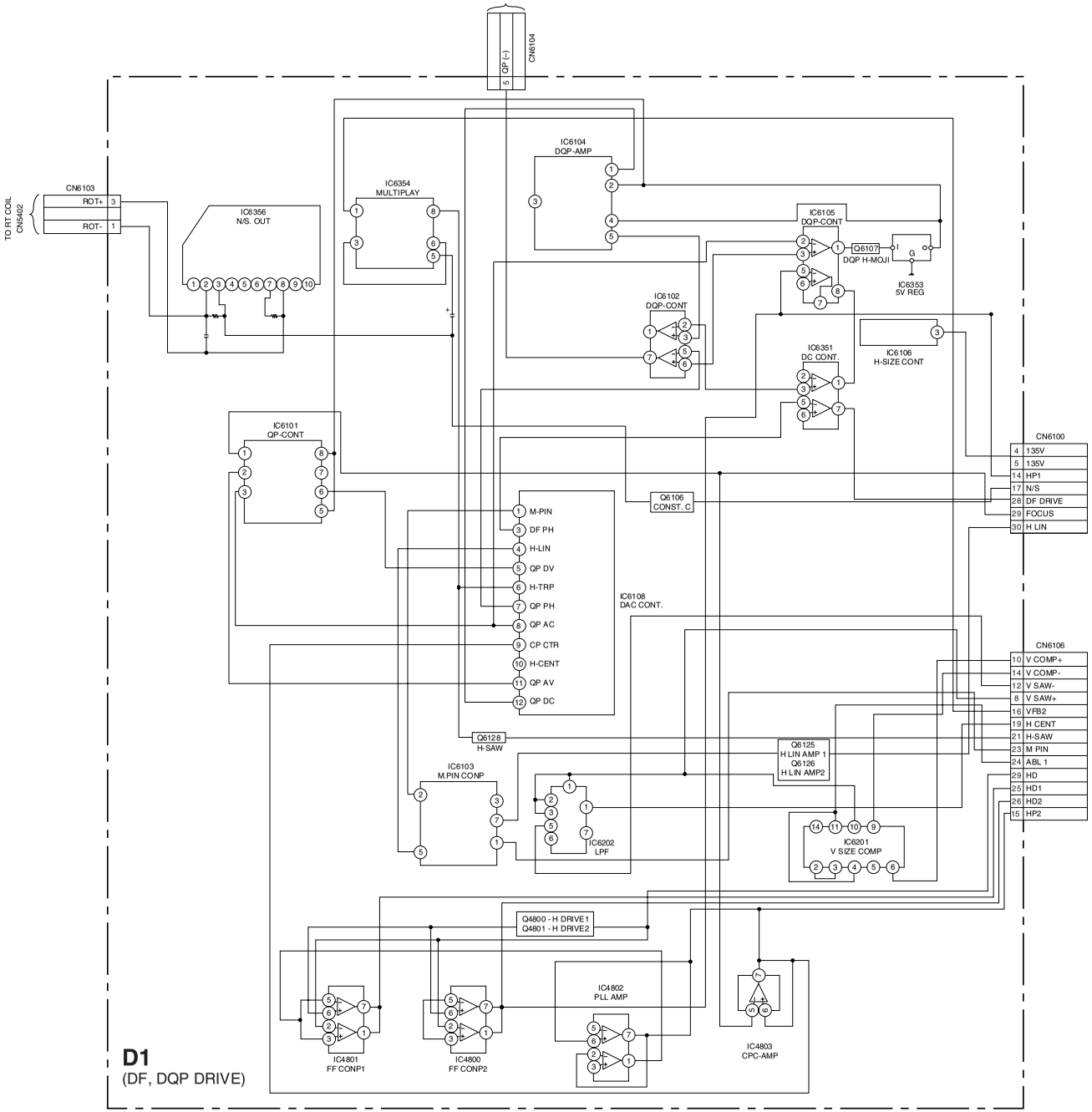

D1
(DF, DQP DRIVE)

8-2. SCHEMATIC DIAGRAMS

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- △ : internal component.
- : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**
  no mark : PAL
  ( ) : SECAM
  [ ] : NTSC 3.58
  « » : NTSC 4.43
- **Readings are taken with a 10Ω MW digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltages are in V.**
- ＊ **: Cannot be measured.**
- **Circled numbers are waveform references.**
- **: B + bus.**
- **: B – bus.**
- **: signal path.**

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ✻	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The component identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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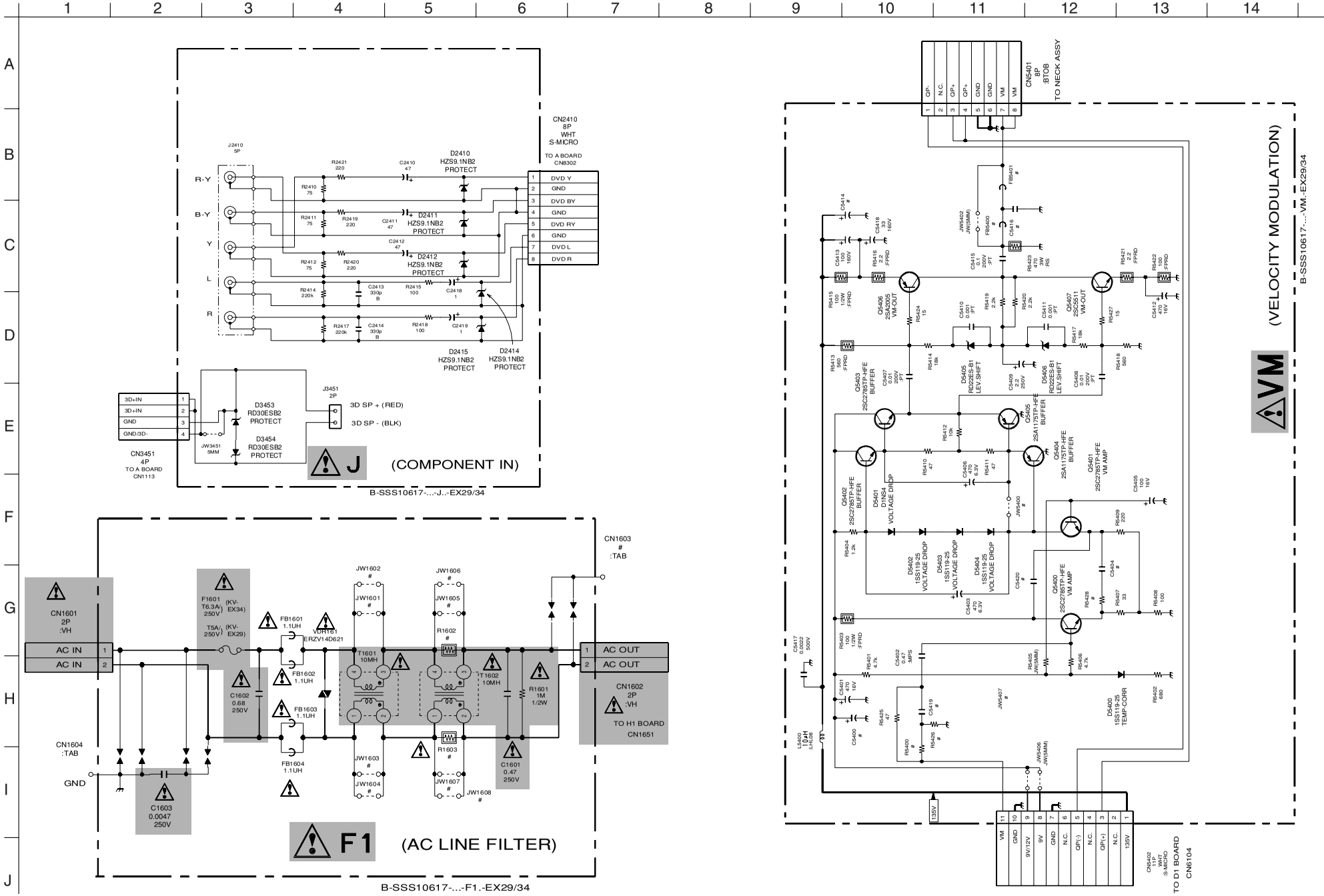
(1) Schematic Diagrams of F1, J and VM Boards



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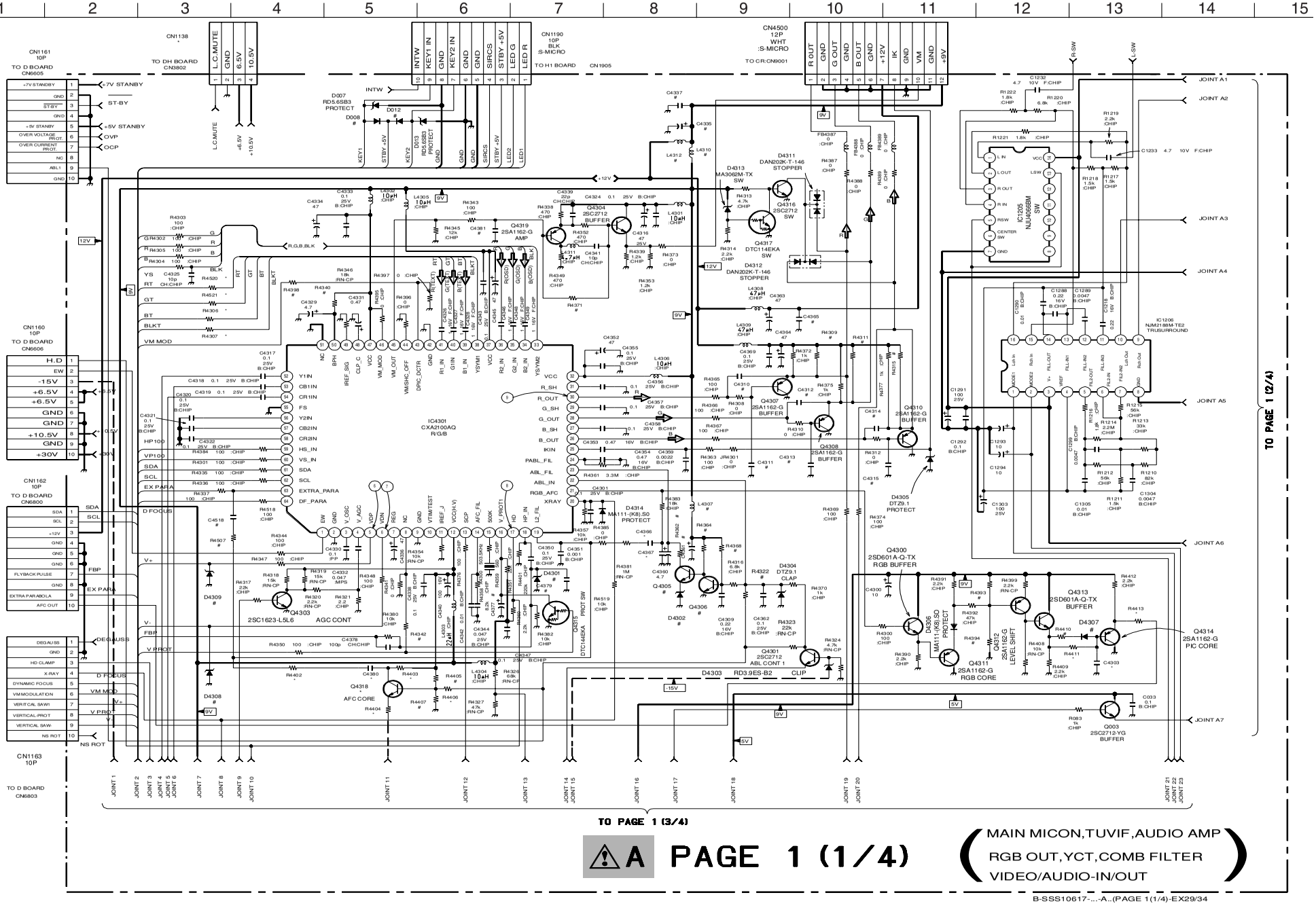
(2) Schematic Diagram of A Board



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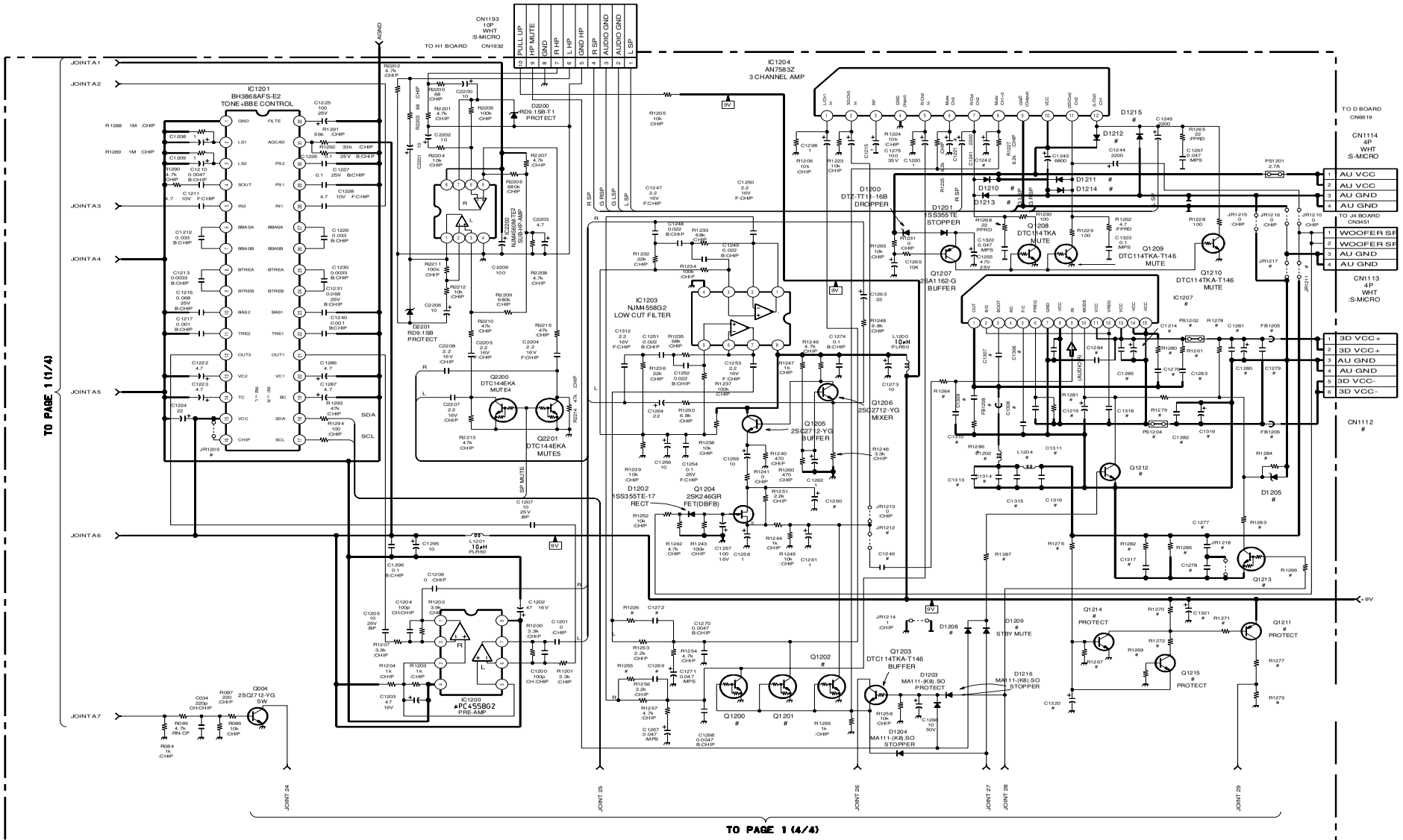

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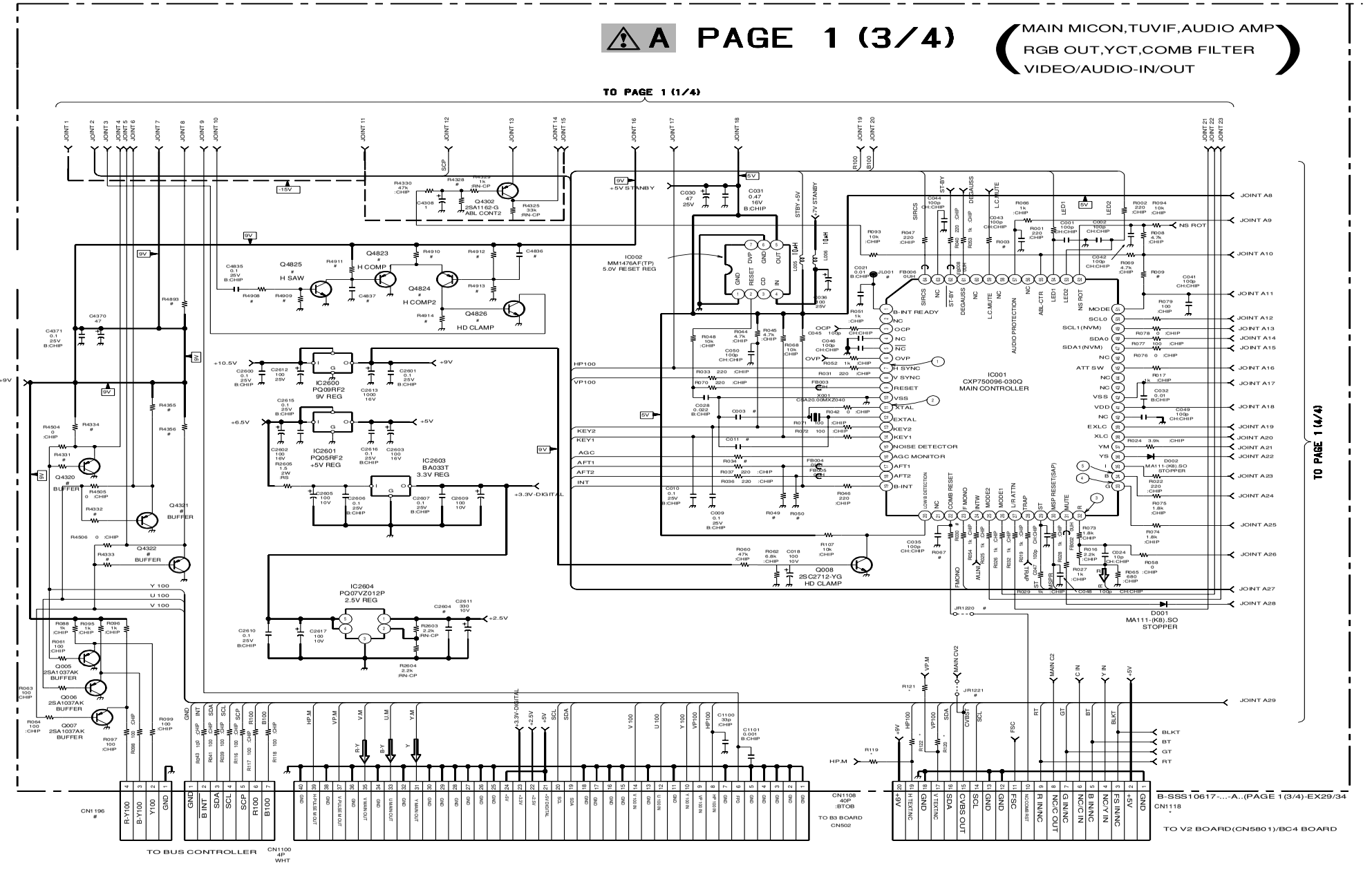
⚠A PAGE 1 (3/4)

MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT



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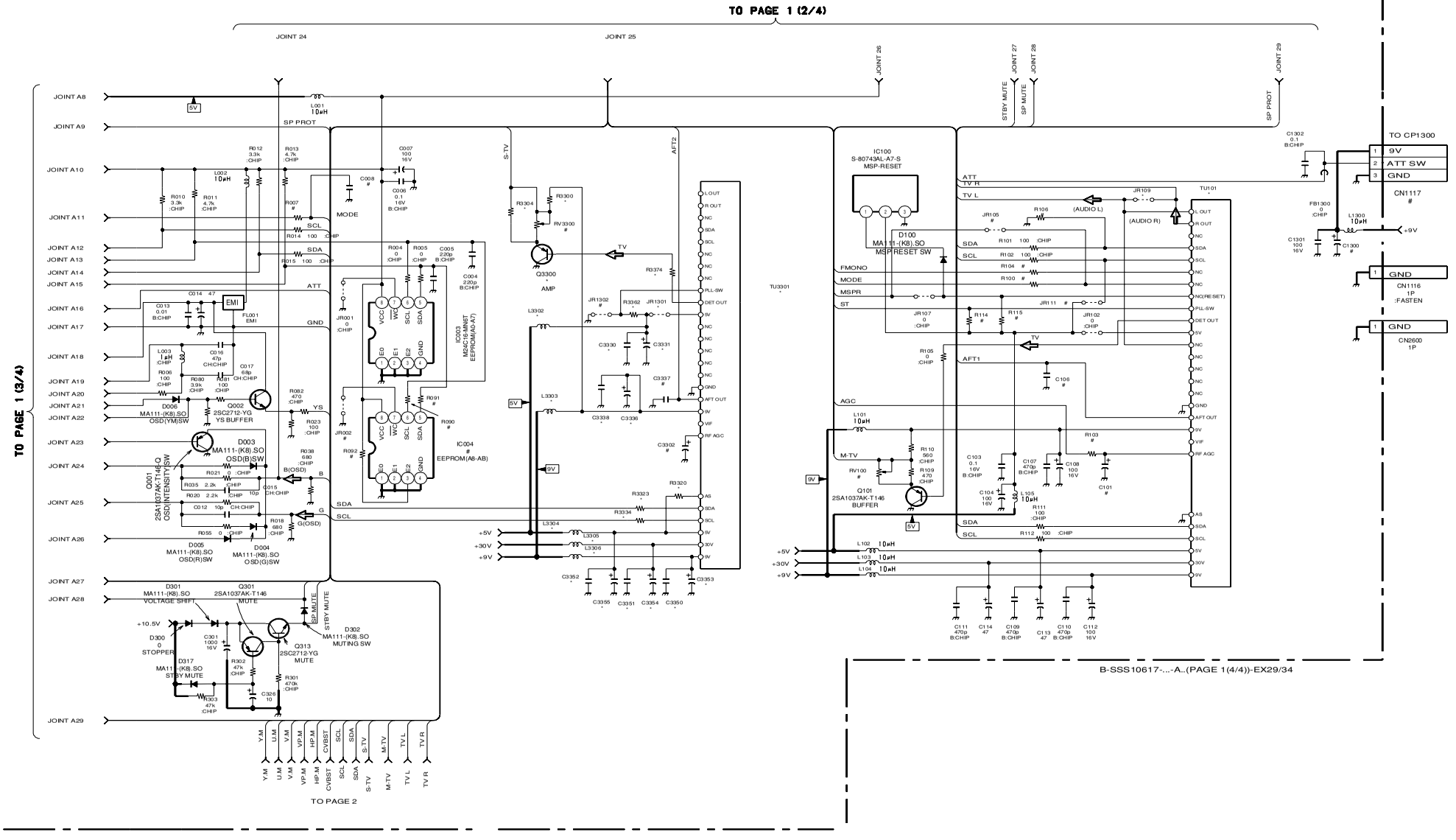
RM-964

⚠A PAGE 1 (4/4)

(MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT)



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KV-EX29M93/EX29M65
RM-964

A PAGE 2 (1/4)

(MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT)

CN8301
10P
WHT
:S-MICRO

TO H1 BOARD
CN1934

R IN
GND
L IN
GND
Y IN
GND
CV IN
S IN
C IN
GND

IC2300
TDA9181T
MULTICOMB FILTER

C OUT
INSEL
OUTSEL
Y OUT
DGND
AGND
VDD V IN
VCC SYS1
SC SYS2
FSCSEL
FSC

Q2304
UN2213
SW

Q2305
2SC2712-YG
BUFFER

Q2306
2SA162-G
BUFFER

Q8301
2SA1037AK-T146
BUFFER

Q8302
2SC2712-YG
BUFFER

Q8303
2SC2712-YG
BUFFER

Q8304
2SC2712-YG
BUFFER

Q8306
2SC2712-YG
BUFFER

Q8325
#

D8301 D8302 D8303 D8304 D8305 D8306 D8307 D8308 D8309 D8310 D8311 D8312 D8313 D8314
RD9.1SB-T1
PROTECT

D8320 D8321 D8322 D8323 D8324 D8325
RD9.1SB-T1
PROTECT

J8301
S TERMINAL

J8302
12P

VIDEO IN 1
L/MONO
AUDIO
VIDEO IN 2
L/MONO
AUDIO
VIDEO IN 3
L/MONO
AUDIO
VIDEO
OUT
MONITOR
L/MONO
AUDIO
R

Y IN
C IN
+5V
5V
9V

JOINT A1
JOINT A2
JOINT A3
JOINT A4
JOINT A5
JOINT A6
JOINT A7
JOINT A8
JOINT A9
JOINT A10
JOINT A11
JOINT A12

TO PAGE 2 (2/4)

JOINT 1
JOINT 2
JOINT 3
JOINT 4
JOINT 5
JOINT 6
JOINT 7
JOINT 8

TO PAGE 2 (3/4)

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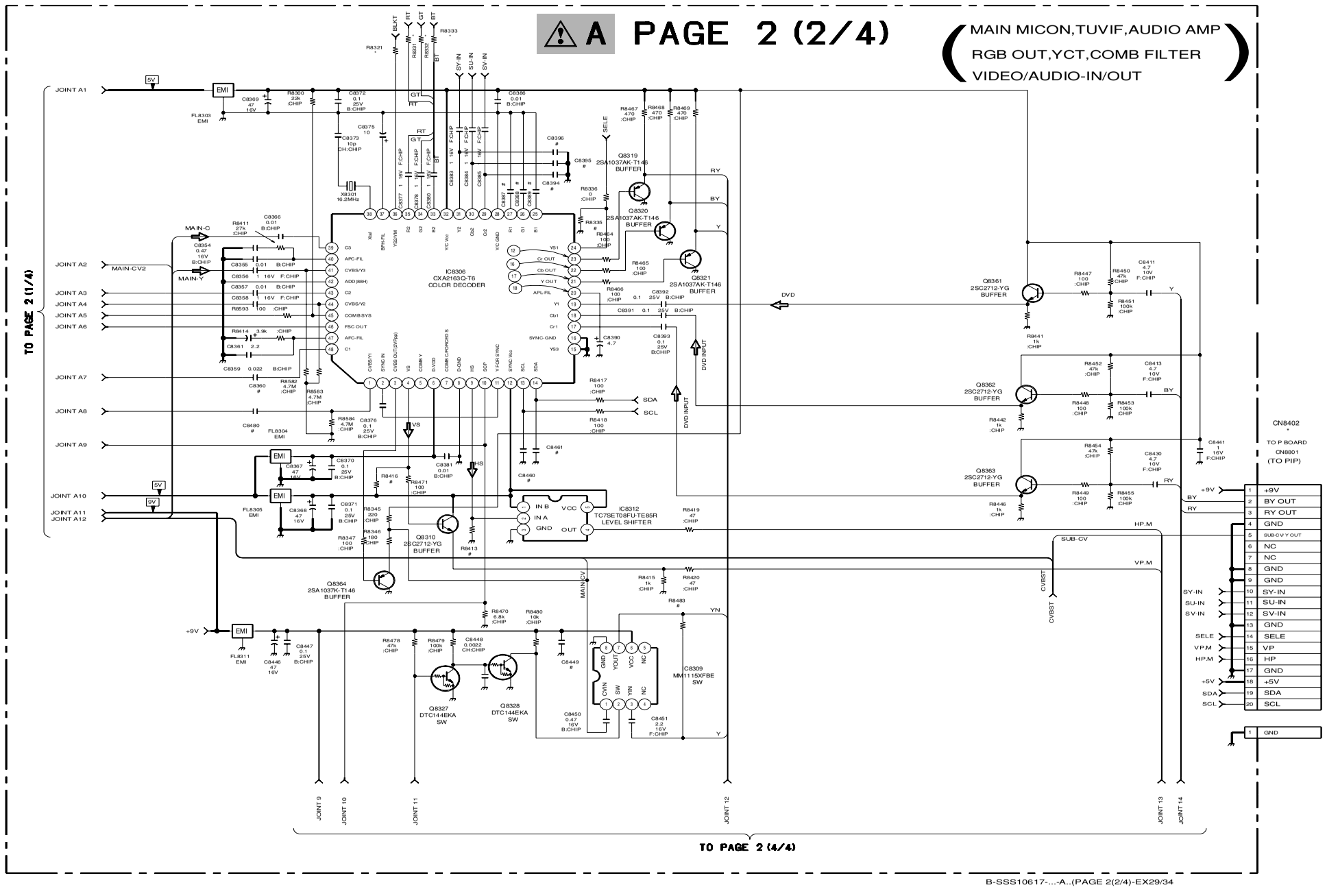
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

⚠A PAGE 2 (2/4)

MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT



B-SSS10617-...-A..(PAGE 2(2/4)-EX29/34

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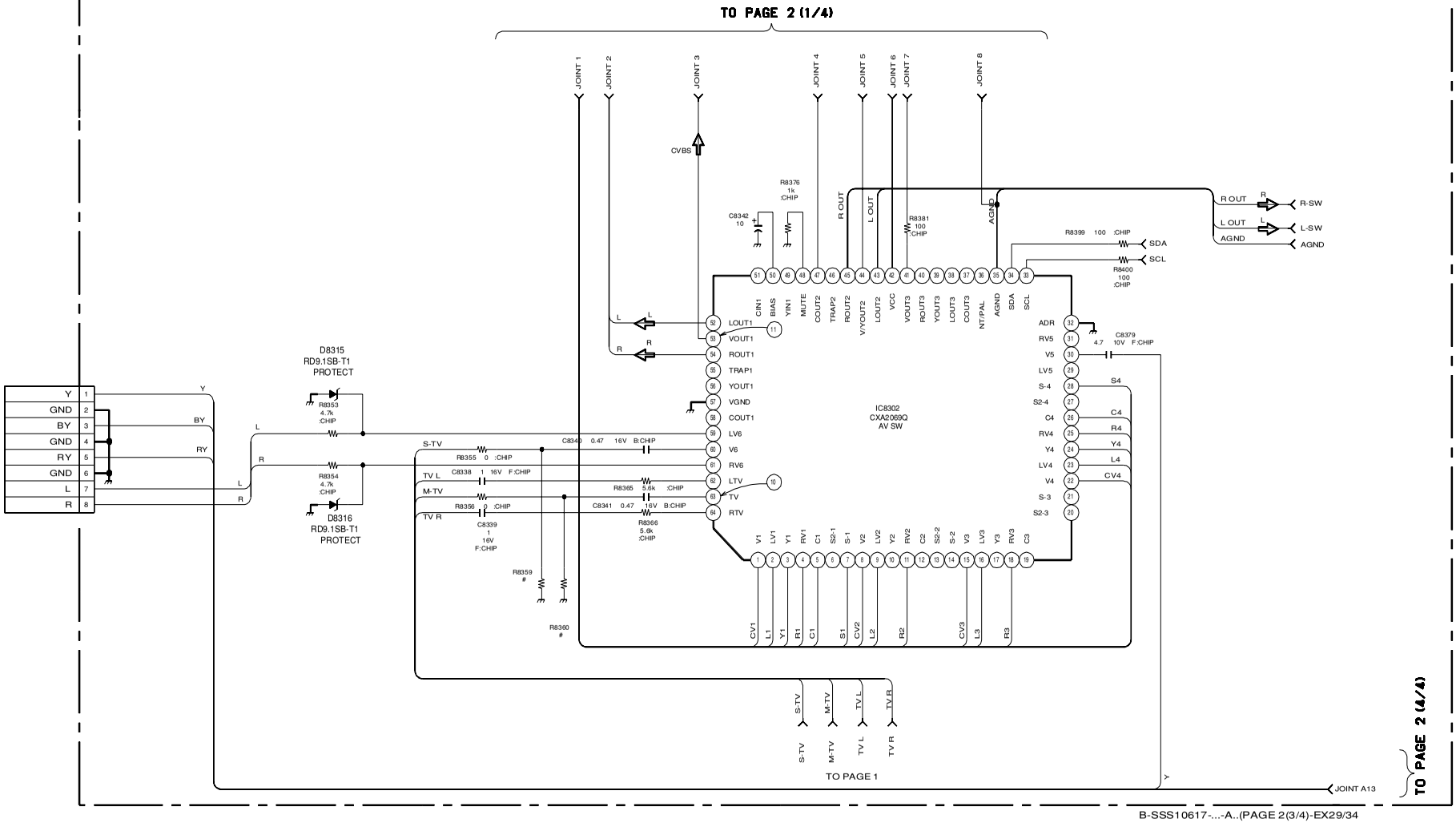
RM-963
KV-EX29M93/EX29M65
RM-964

⚠A PAGE 2 (3/4)

(MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTER
VIDEO/AUDIO-IN/OUT)



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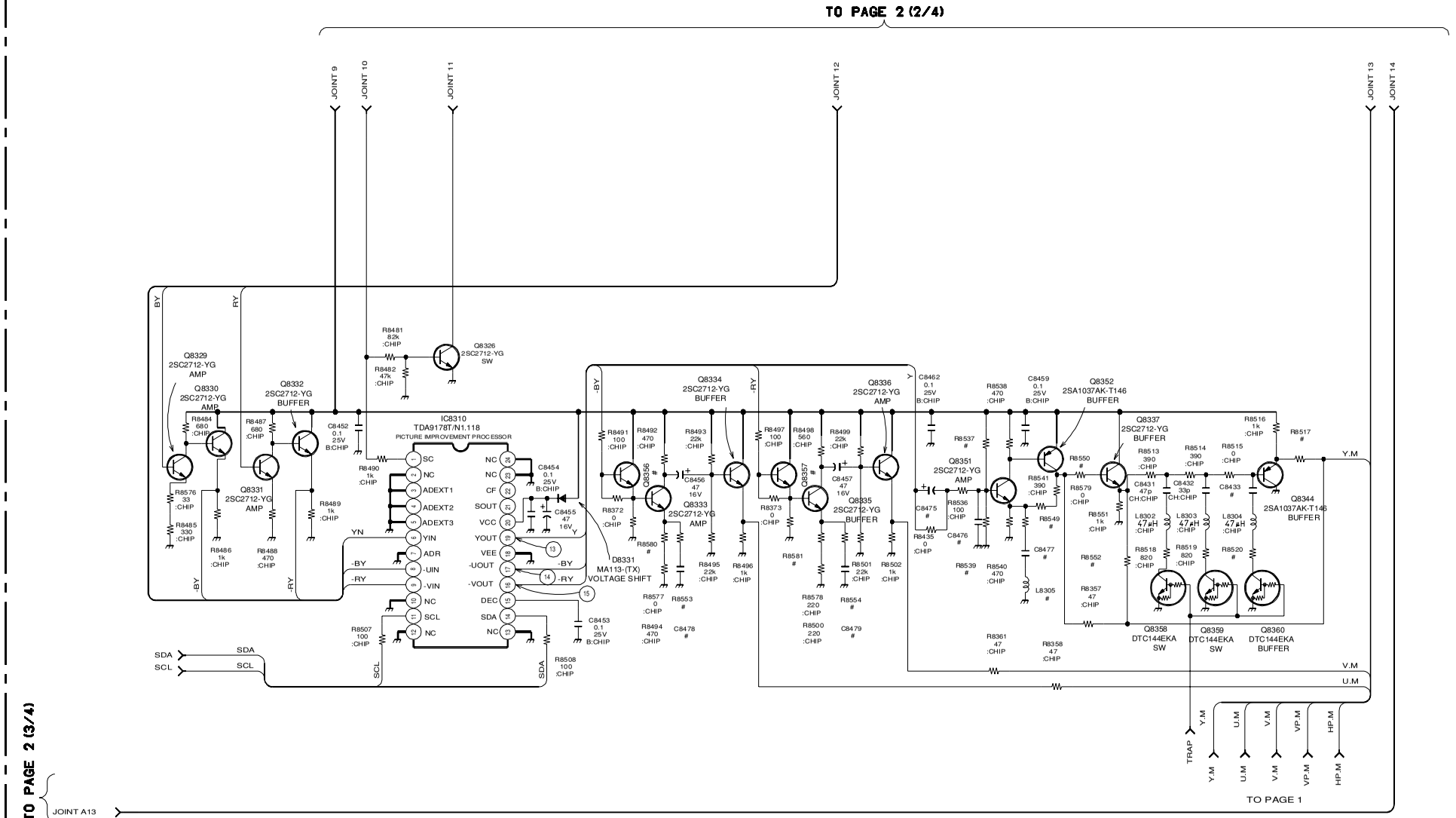
KV-EX29M93/EX29M65
RM-964

⚠A PAGE 2 (4/4)

(MAIN MICON,TUVIF,AUDIO AMP
RGB OUT,YCT,COMB FILTE
VIDEO/AUDIO-IN/OUT)



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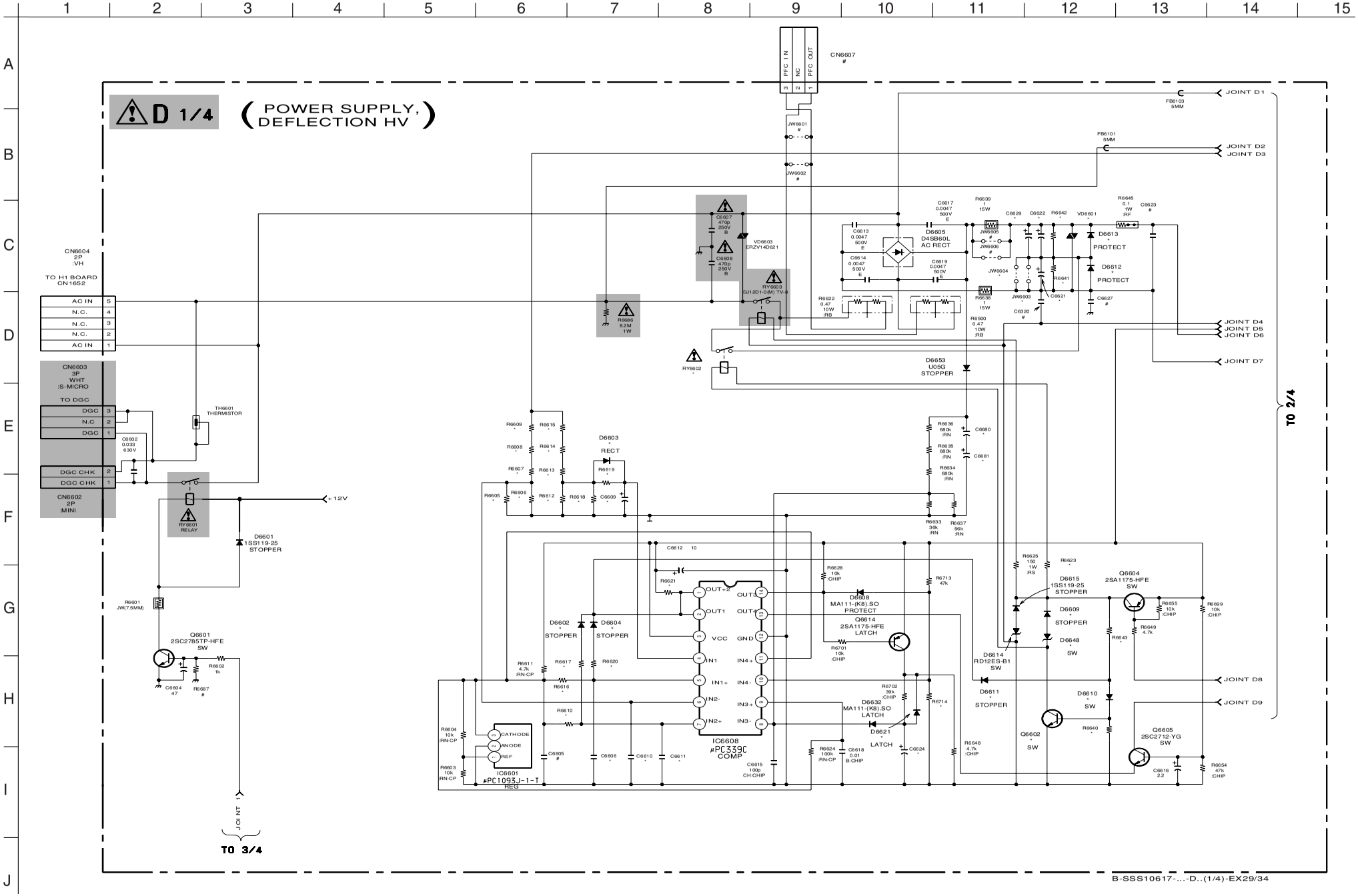
RM-964

(3) Schematic Diagram of D Board



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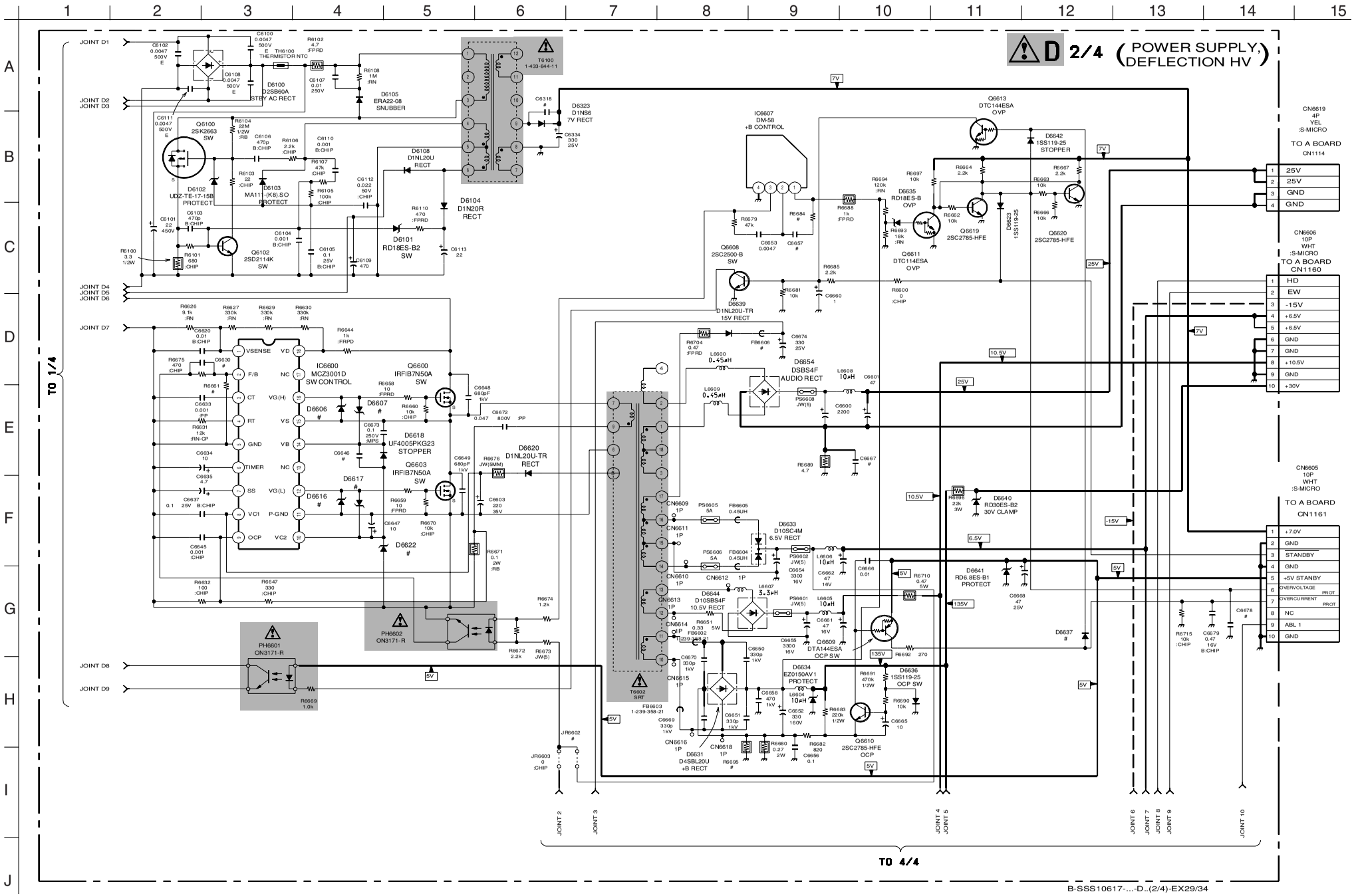
RM-964



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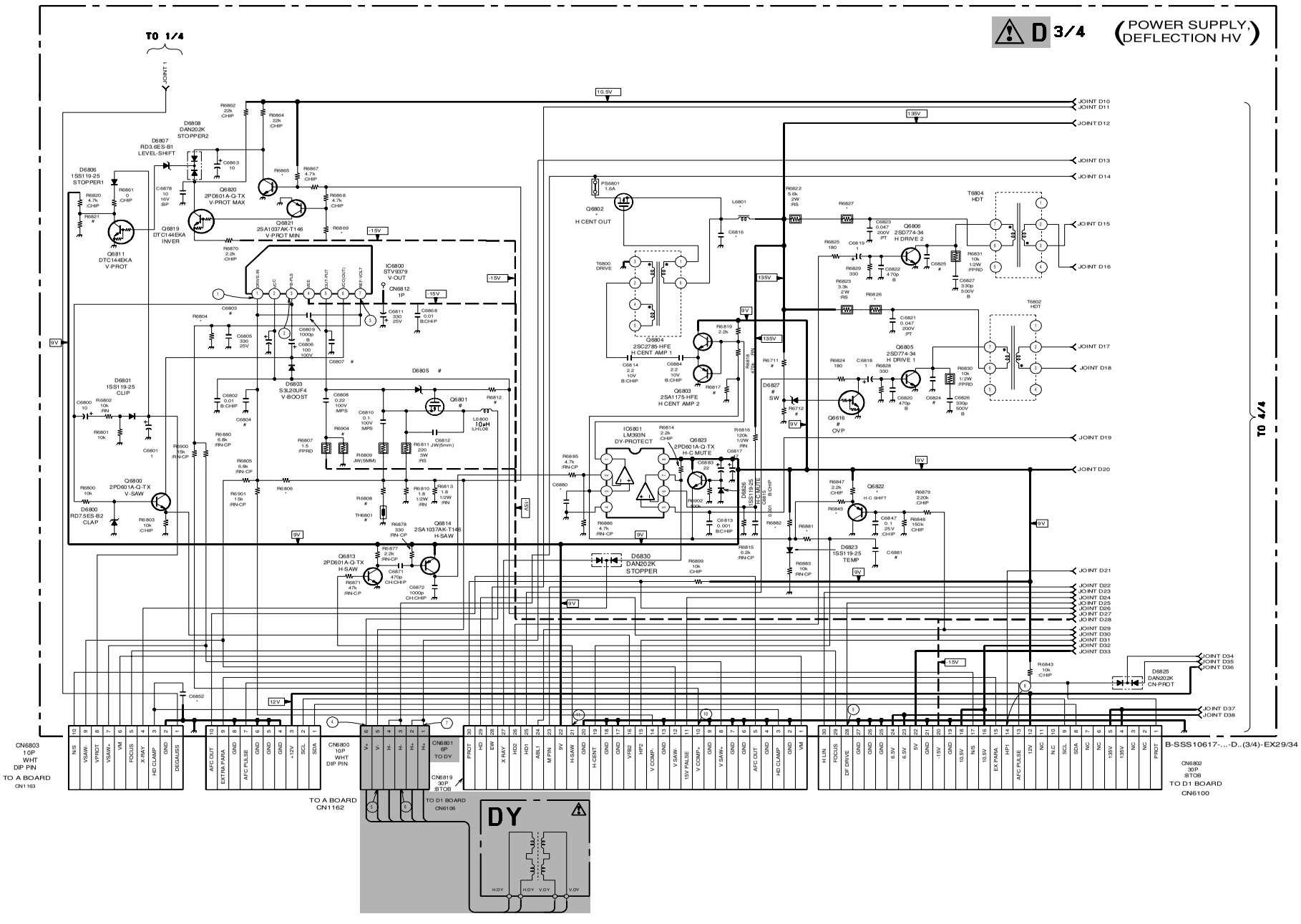
KV-EX29M93/EX29M65
RM-964


D 3/4
POWER SUPPLY, DEFLECTION HV
TO 1/4
TO 4/4
DY
CN6803 10P WHT DIP PIN TO A BOARD CN1163
CN6800 10P WHT DIP PIN TO A BOARD CN1162
CN6801 6P TO DY
CN6819 30P BTOB TO D1 BOARD CN6106
CN6802 30P BTOB TO D1 BOARD CN6100
B-SSS10617-...-D..(3/4)-EX29/34

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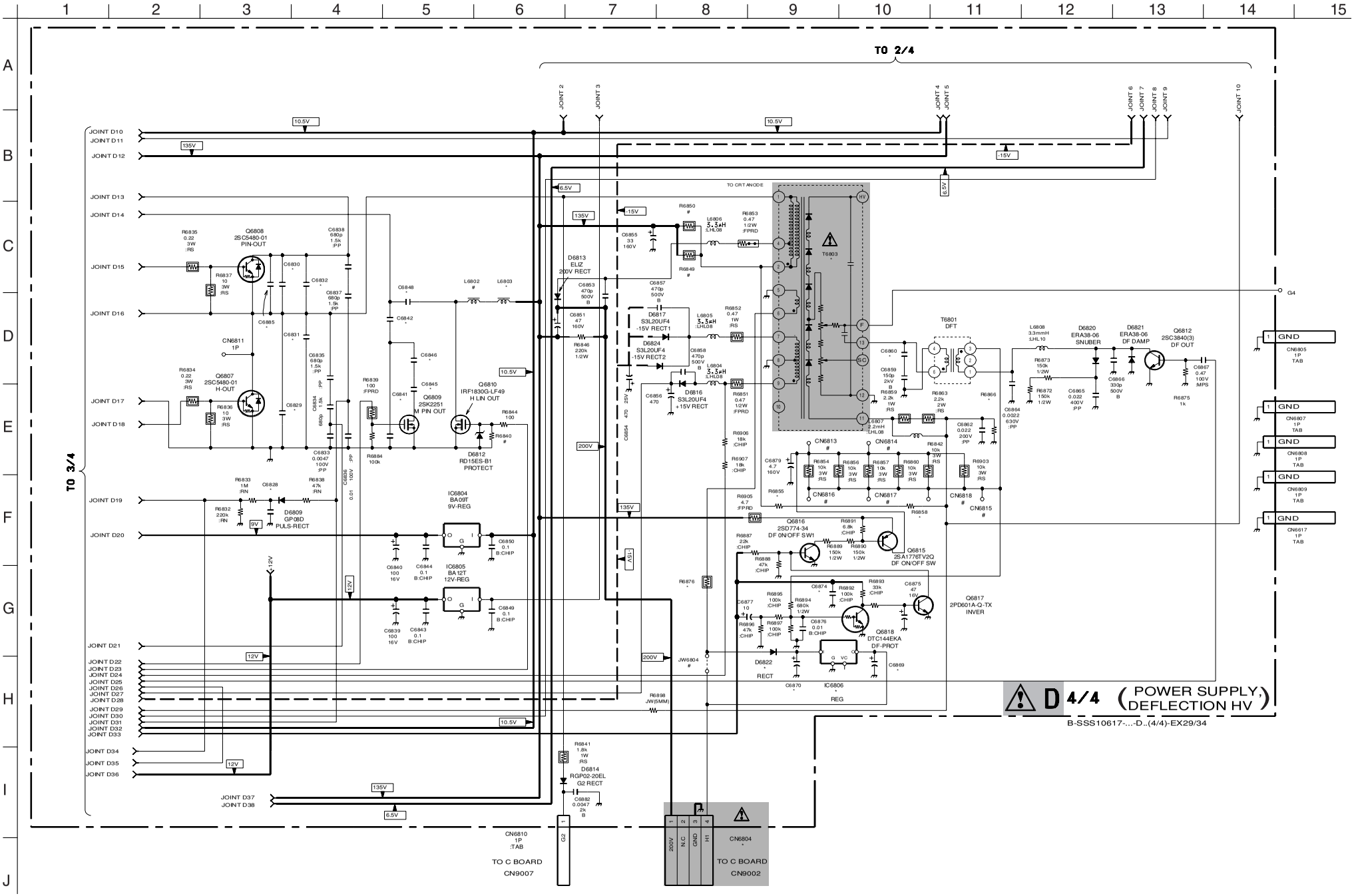

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KV-EX29M39/EX29M87/EX34M97
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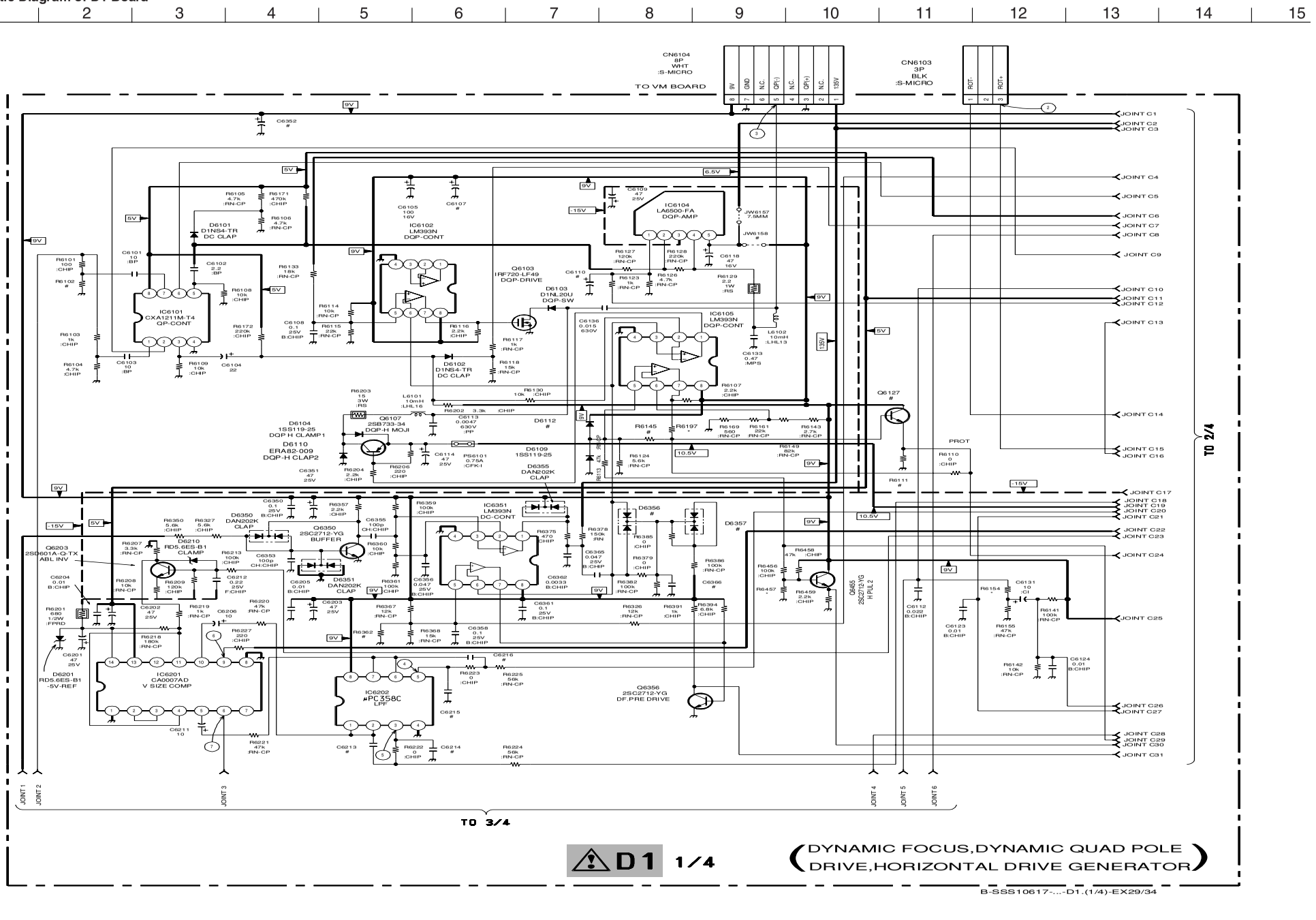
KV-EX29M93/EX29M65
RM-964

(4) Schematic Diagram of D1 Board



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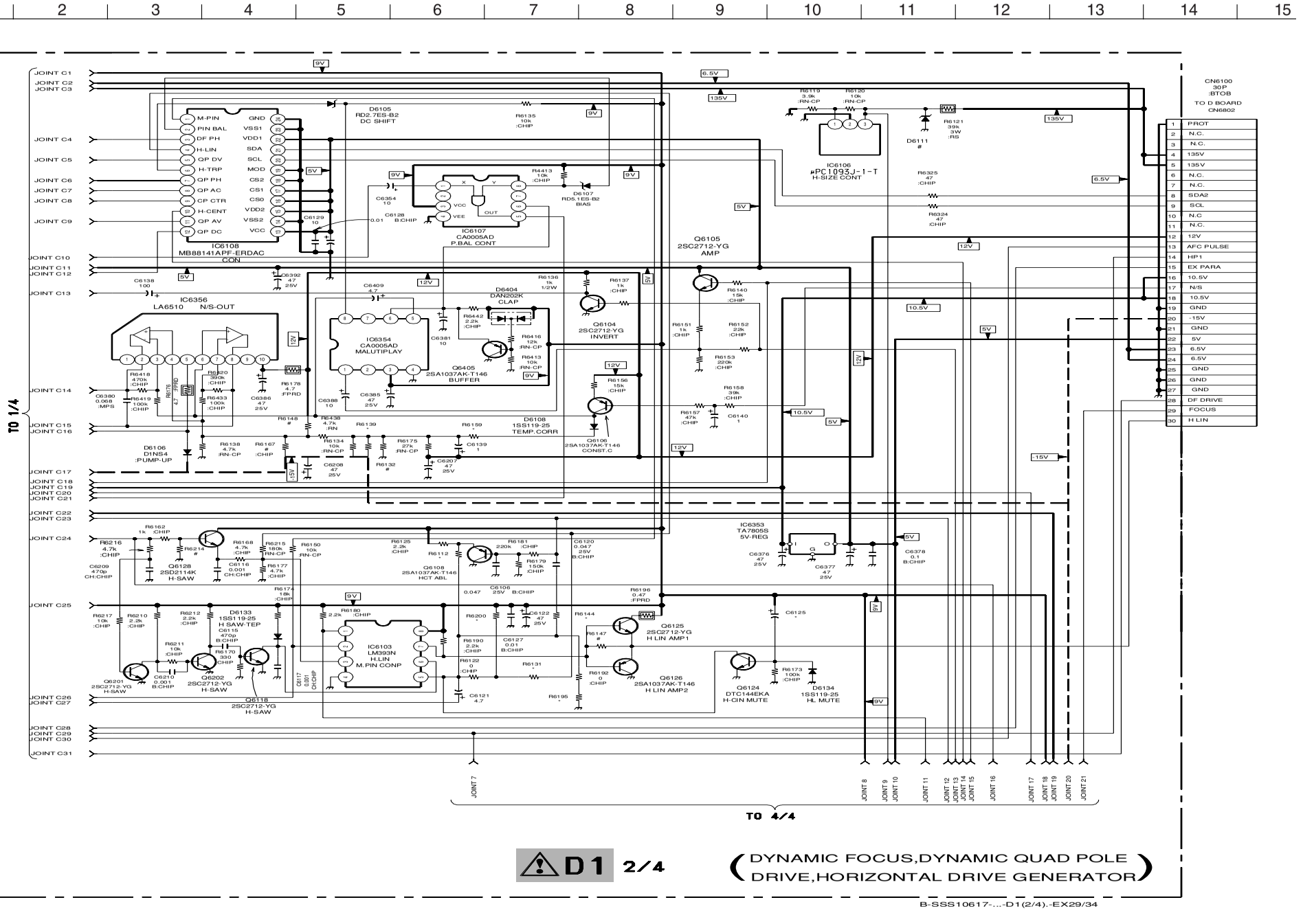

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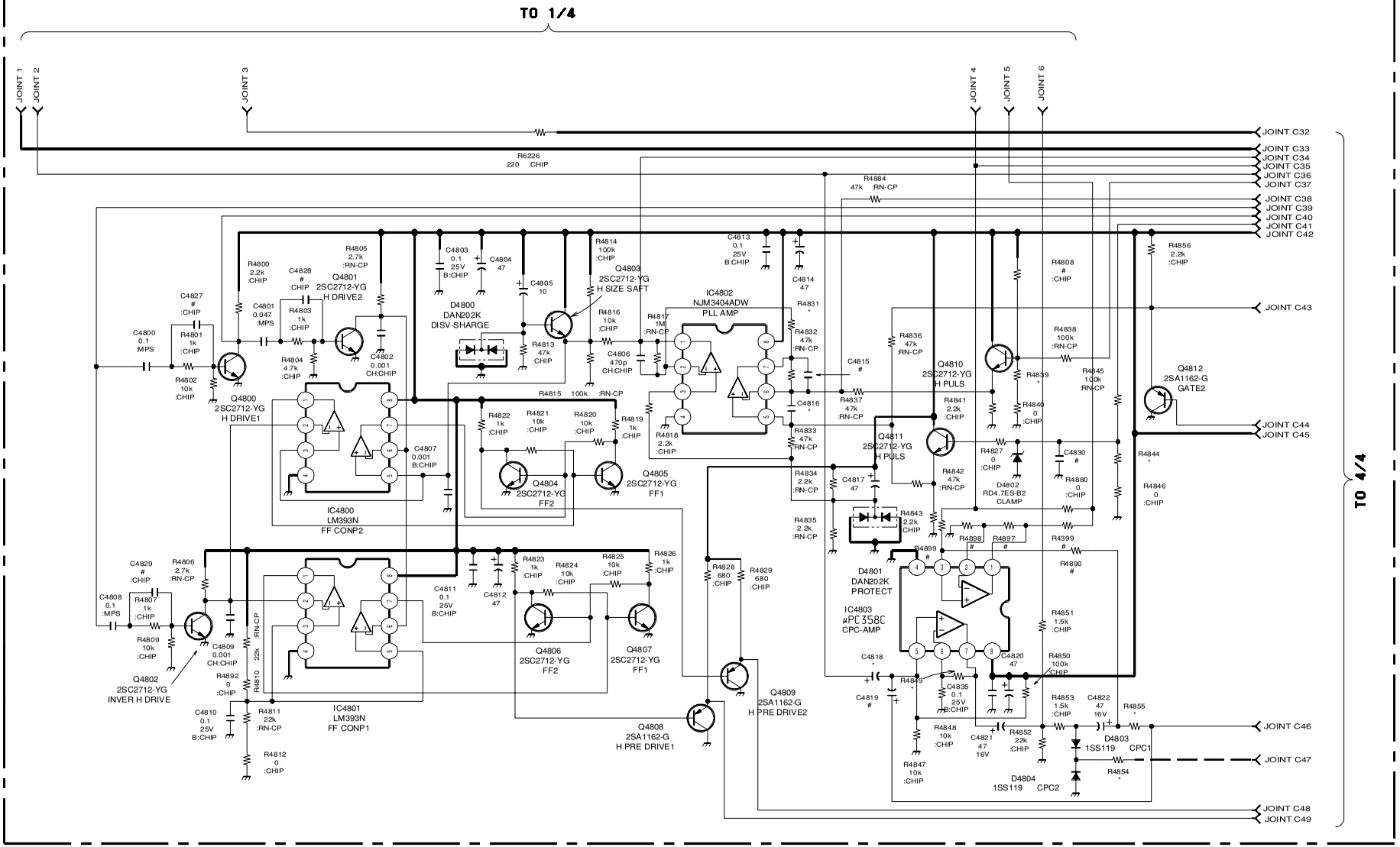
KV-EX29M93/EX29M65
RM-964

⚠D1 3/4 (DYNAMIC FOCUS,DYNAMIC QUAD POLE DRIVE,HORIZONTAL DRIVE GENERATOR)



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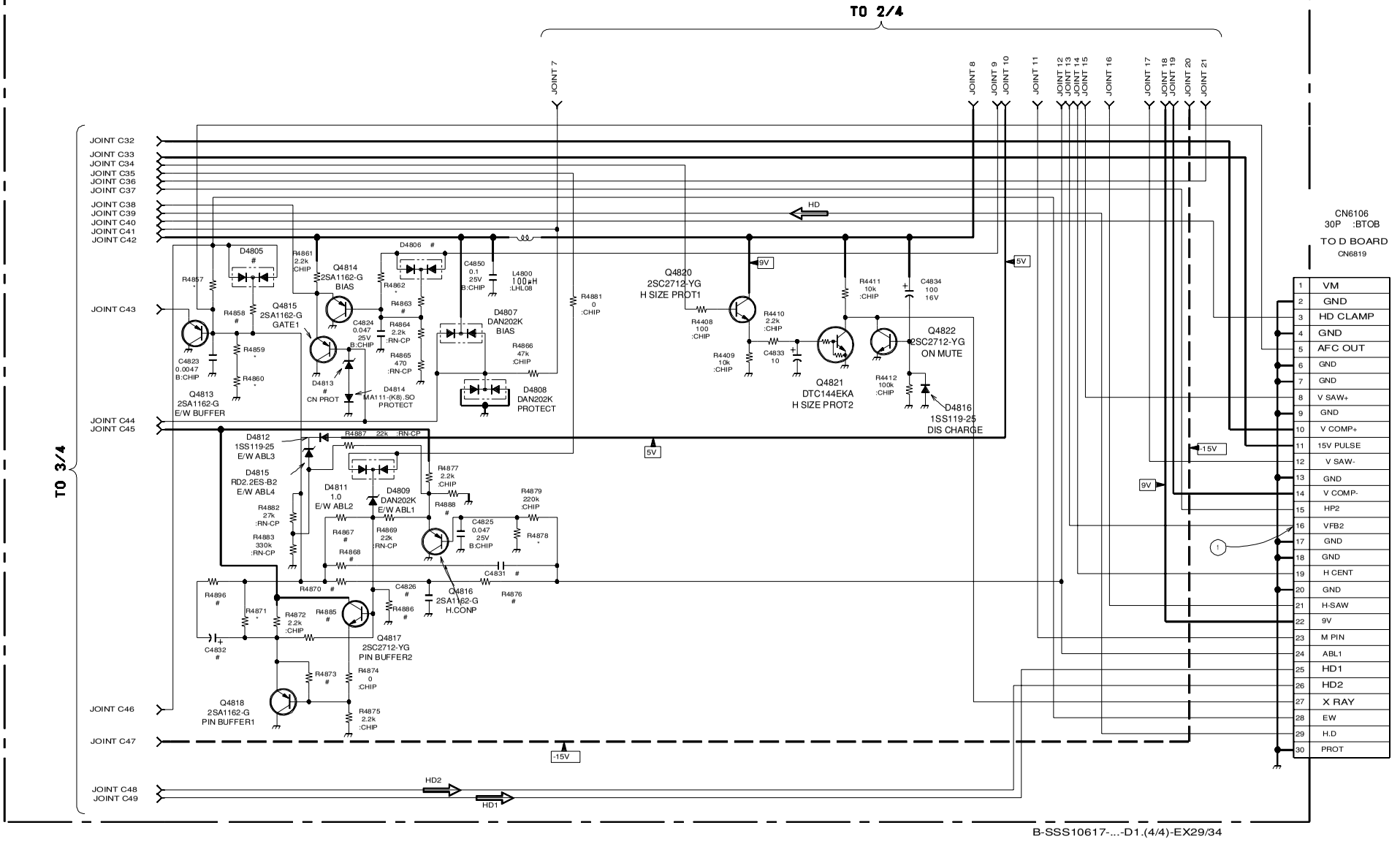
KV-EX29M93/EX29M65
RM-964

D1 4/4 (DYNAMIC FOCUS,DYNAMIC QUAD POLE DRIVE,HORIZONTAL DRIVE GENERATOR)



B-SSS10617-...-D1.(4/4)-EX29/34

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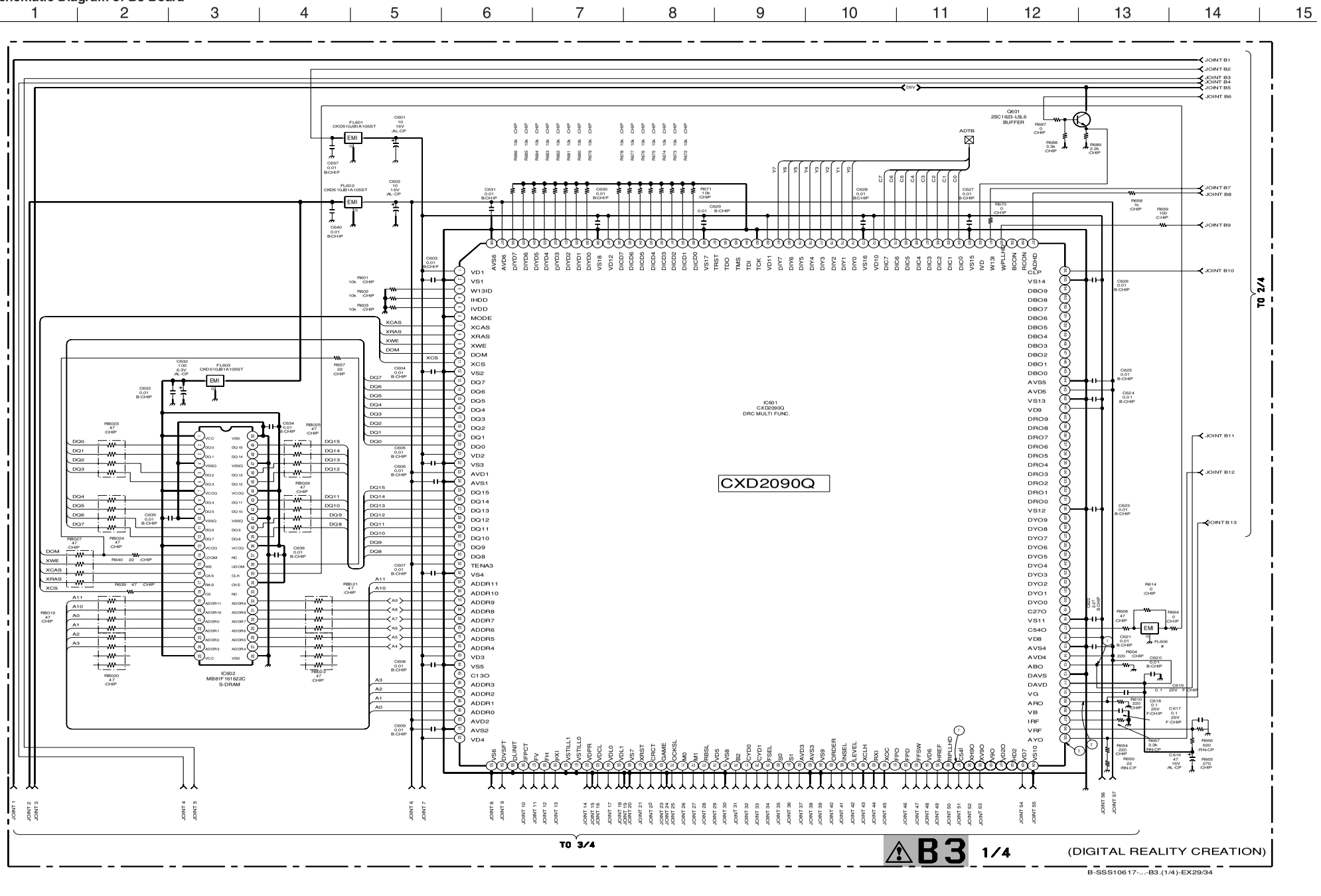
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

(5) Schematic Diagram of B3 Board



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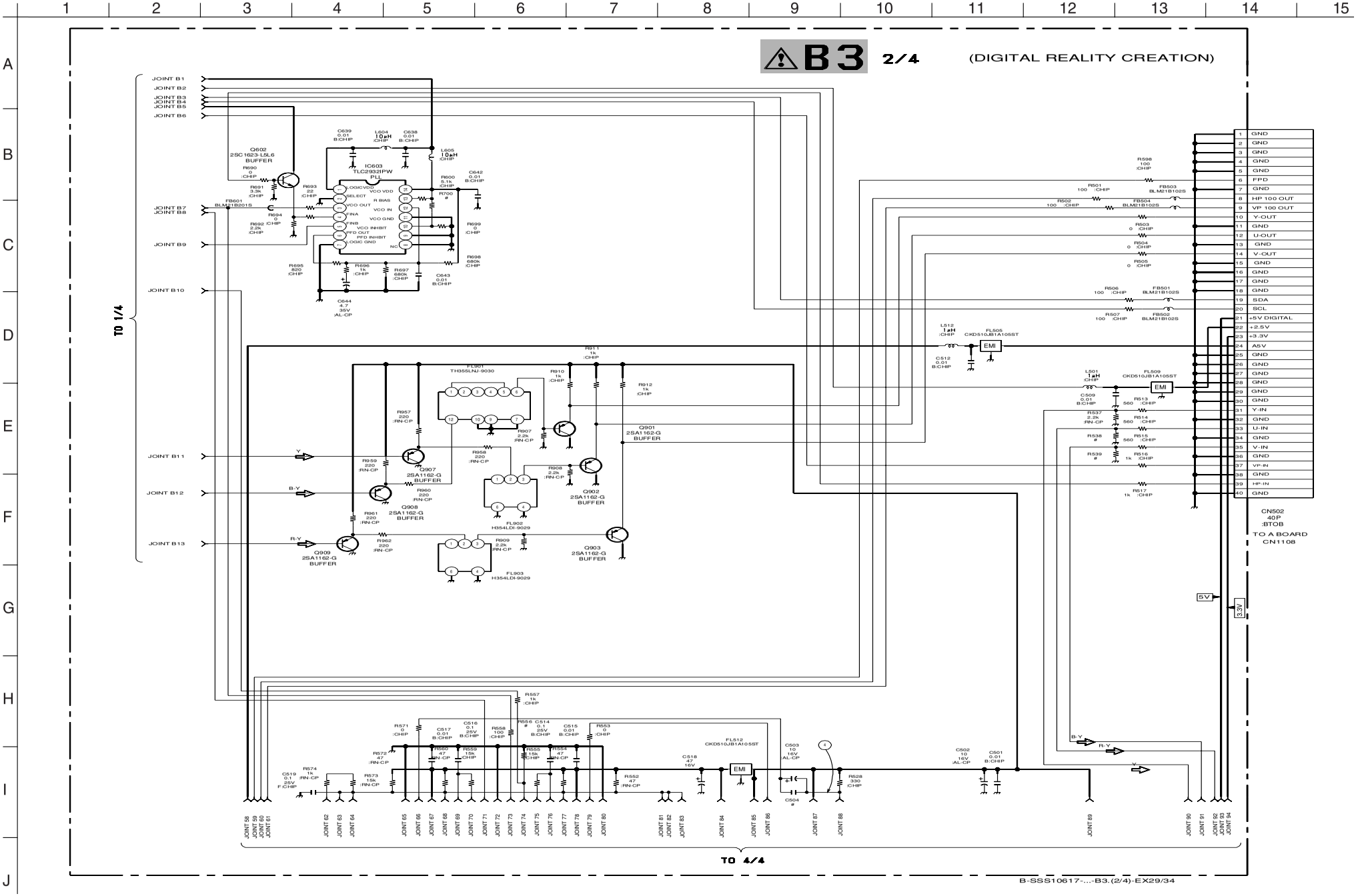
RM-964



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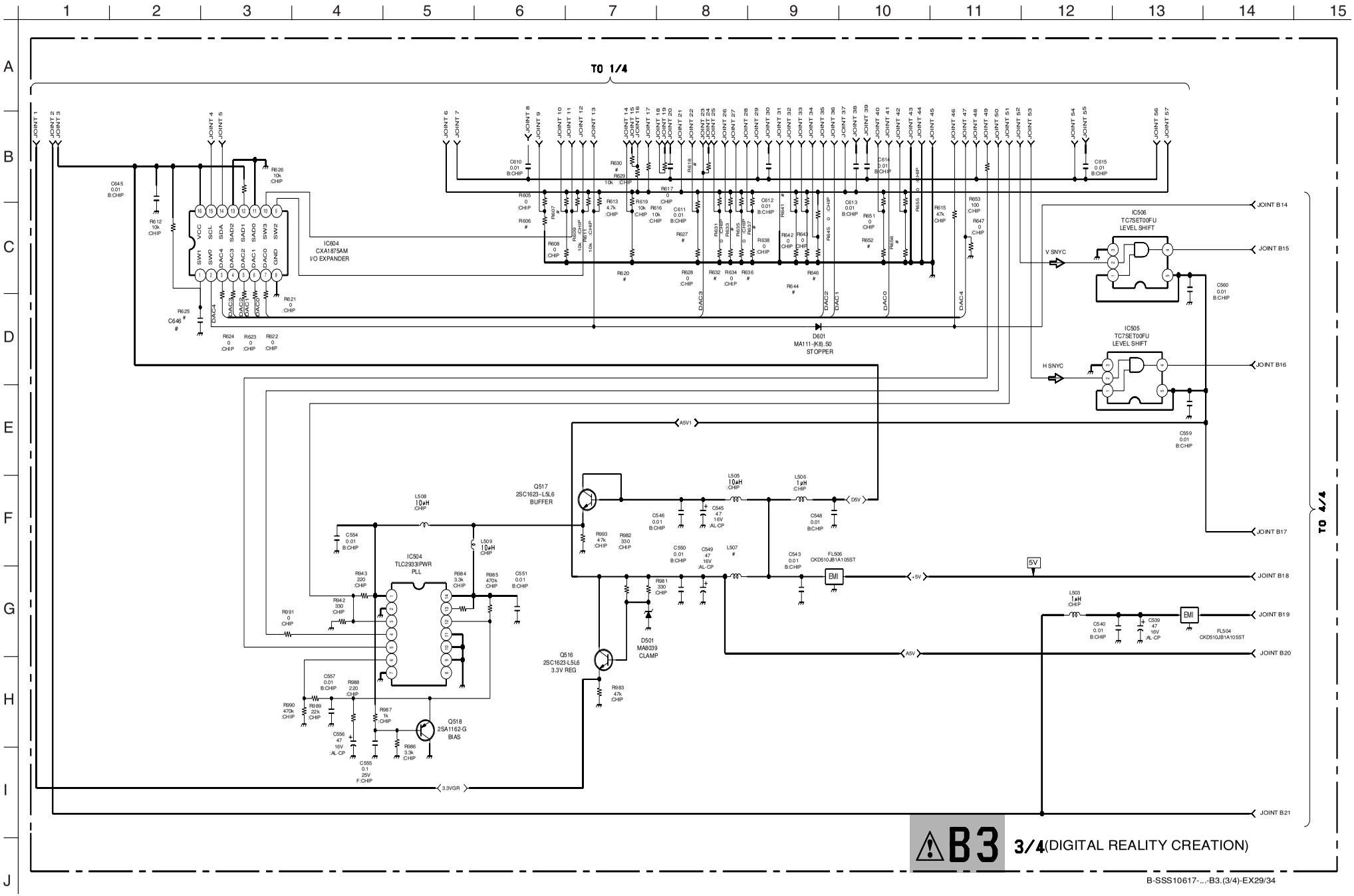
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964



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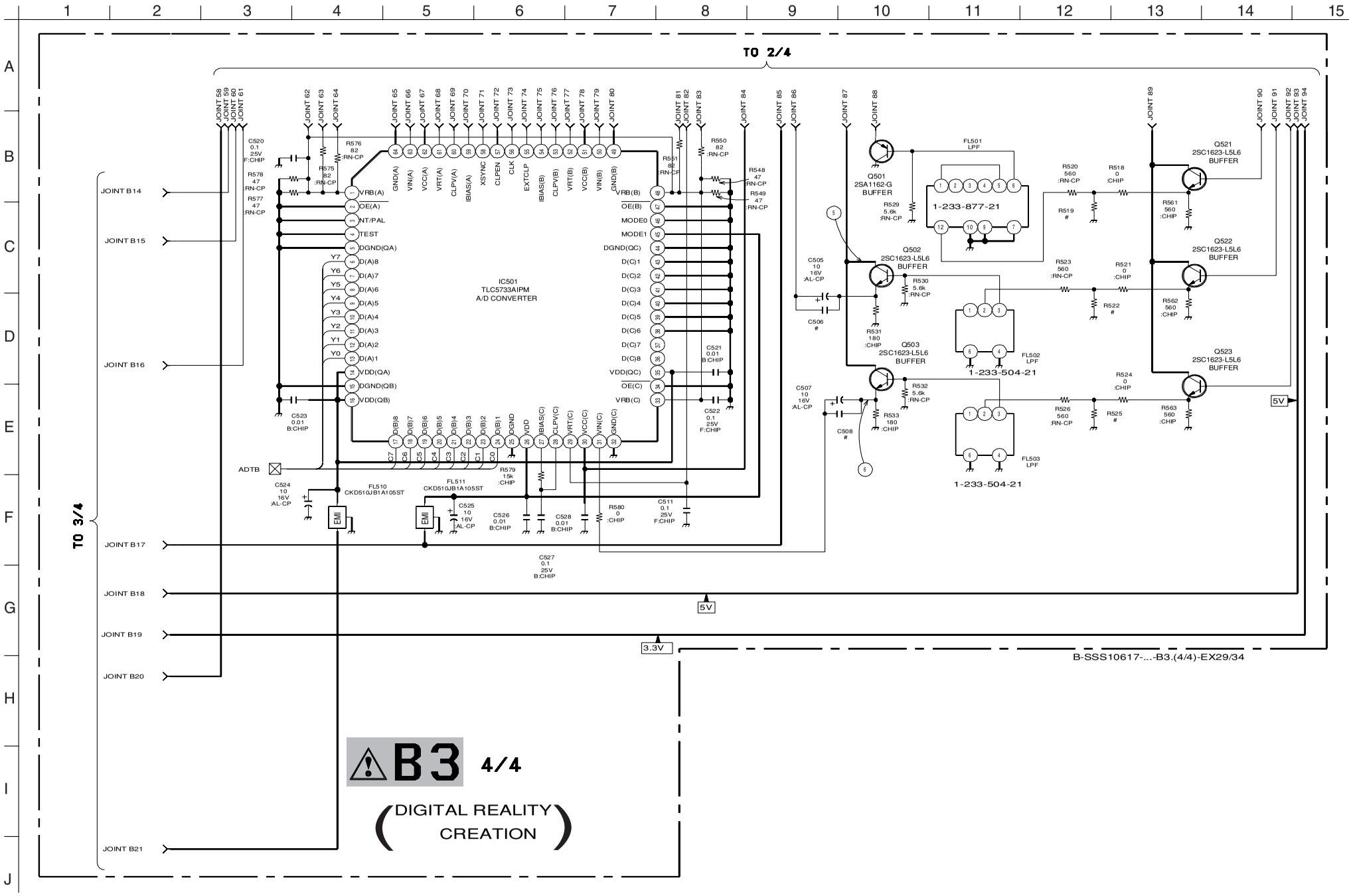
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964



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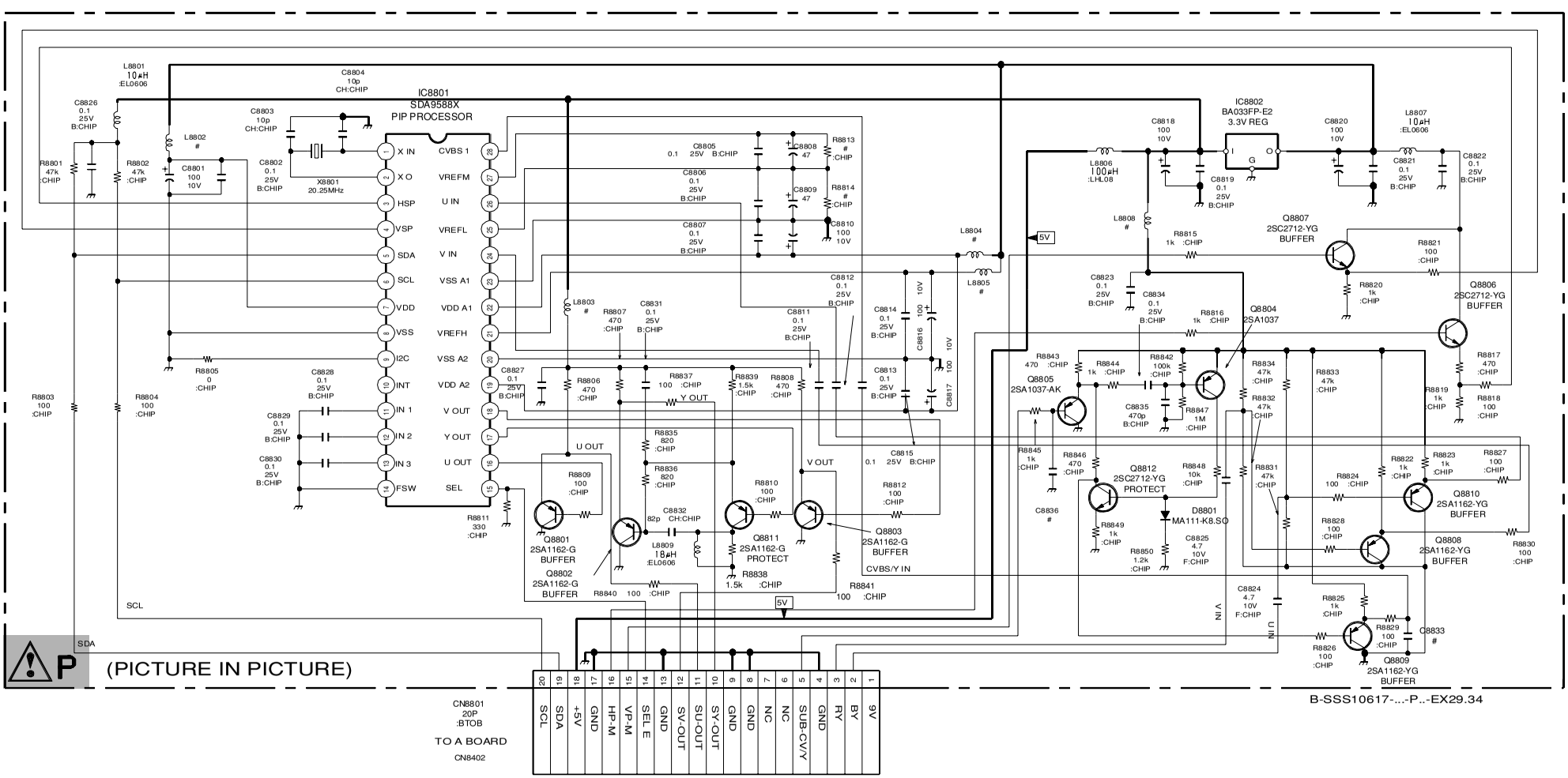
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

(6) Schematic Diagram of P Board

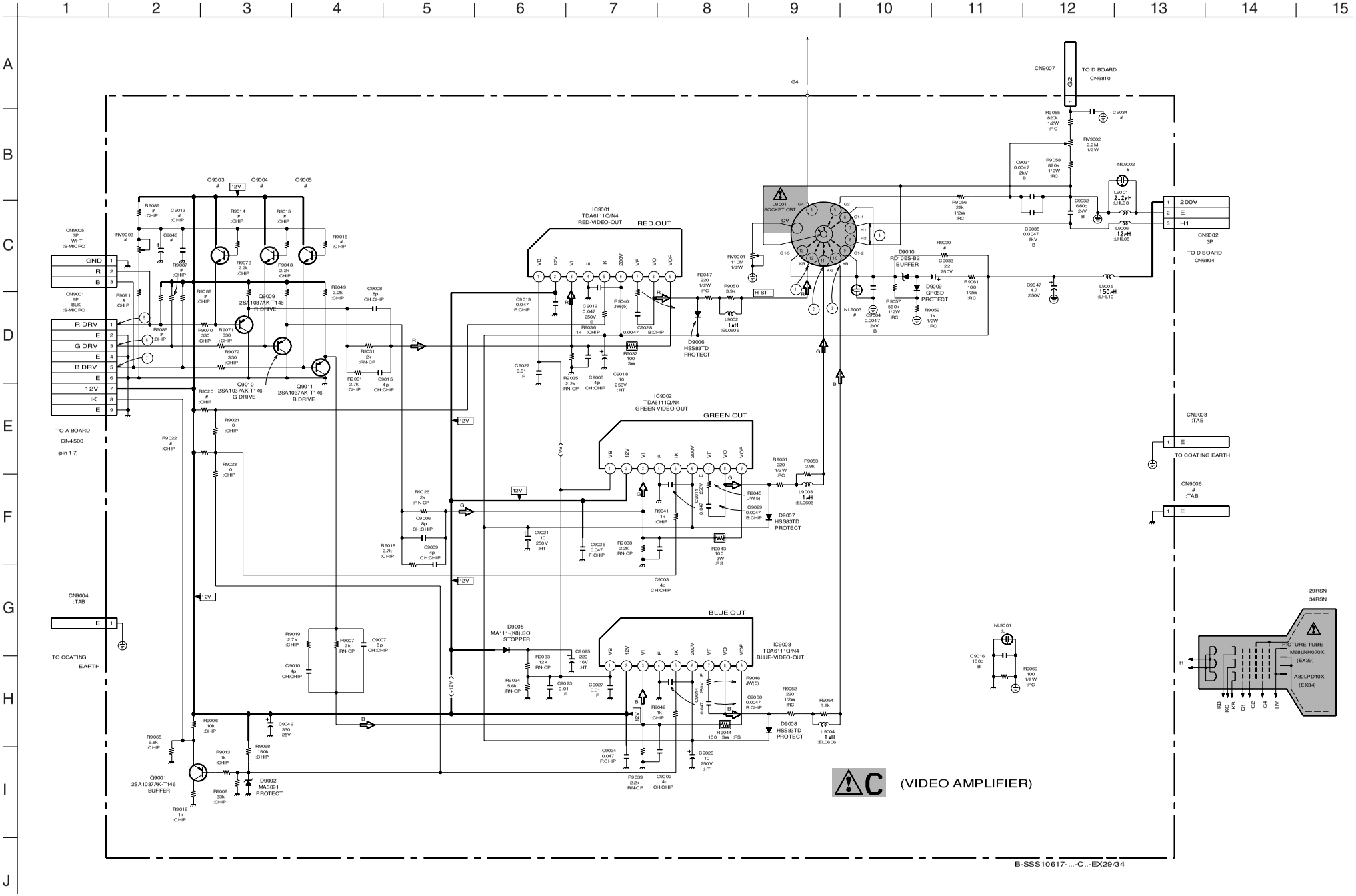
(ONLY USE FOR MODEL KV-EX29M39/EX29M87/EX34M97))



http://cxema.ru

KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

(7) Schematic Diagram of C Board



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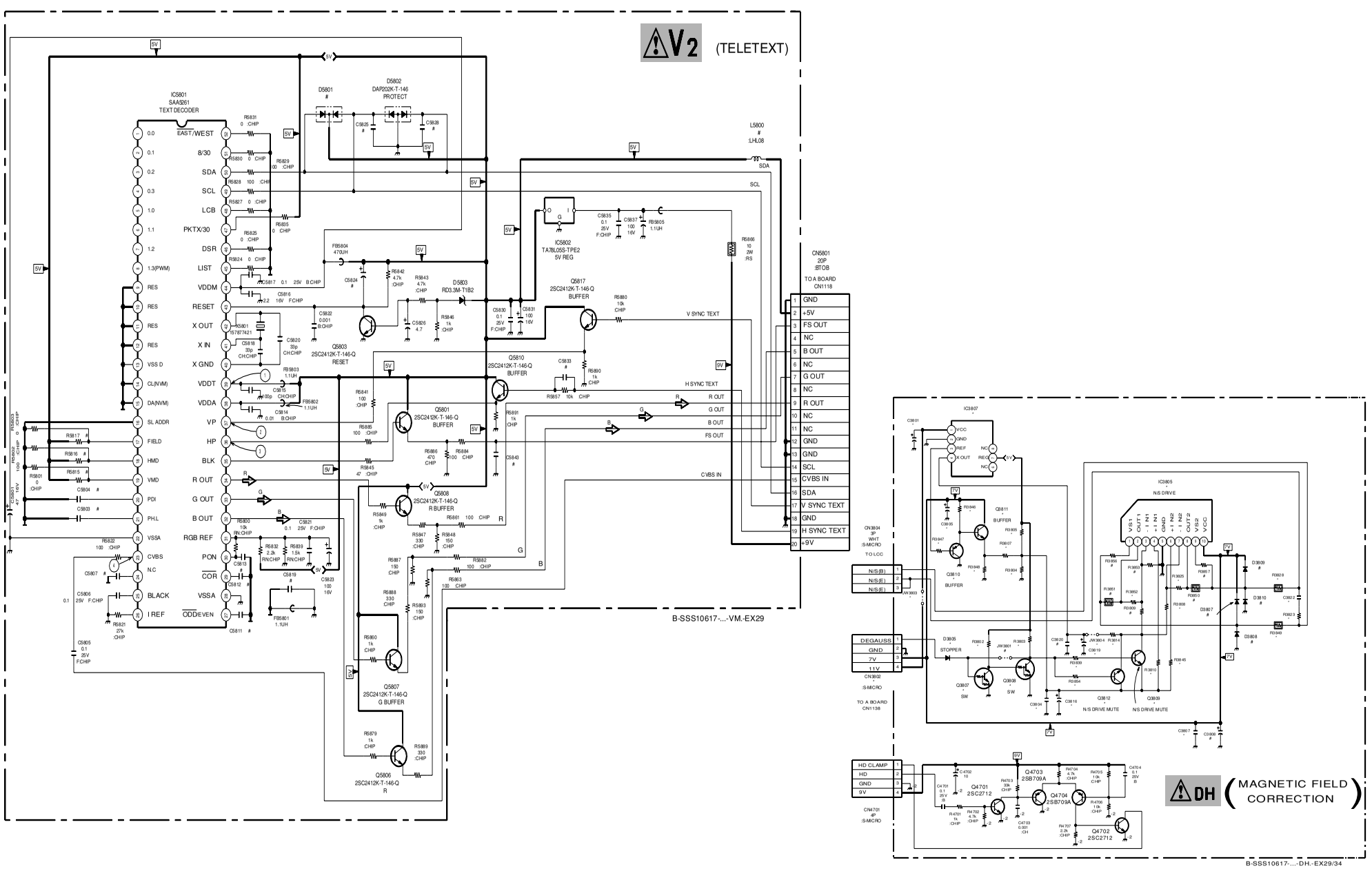
(ONLY USE FOR MODEL KV-EX29M39/EX29M65)



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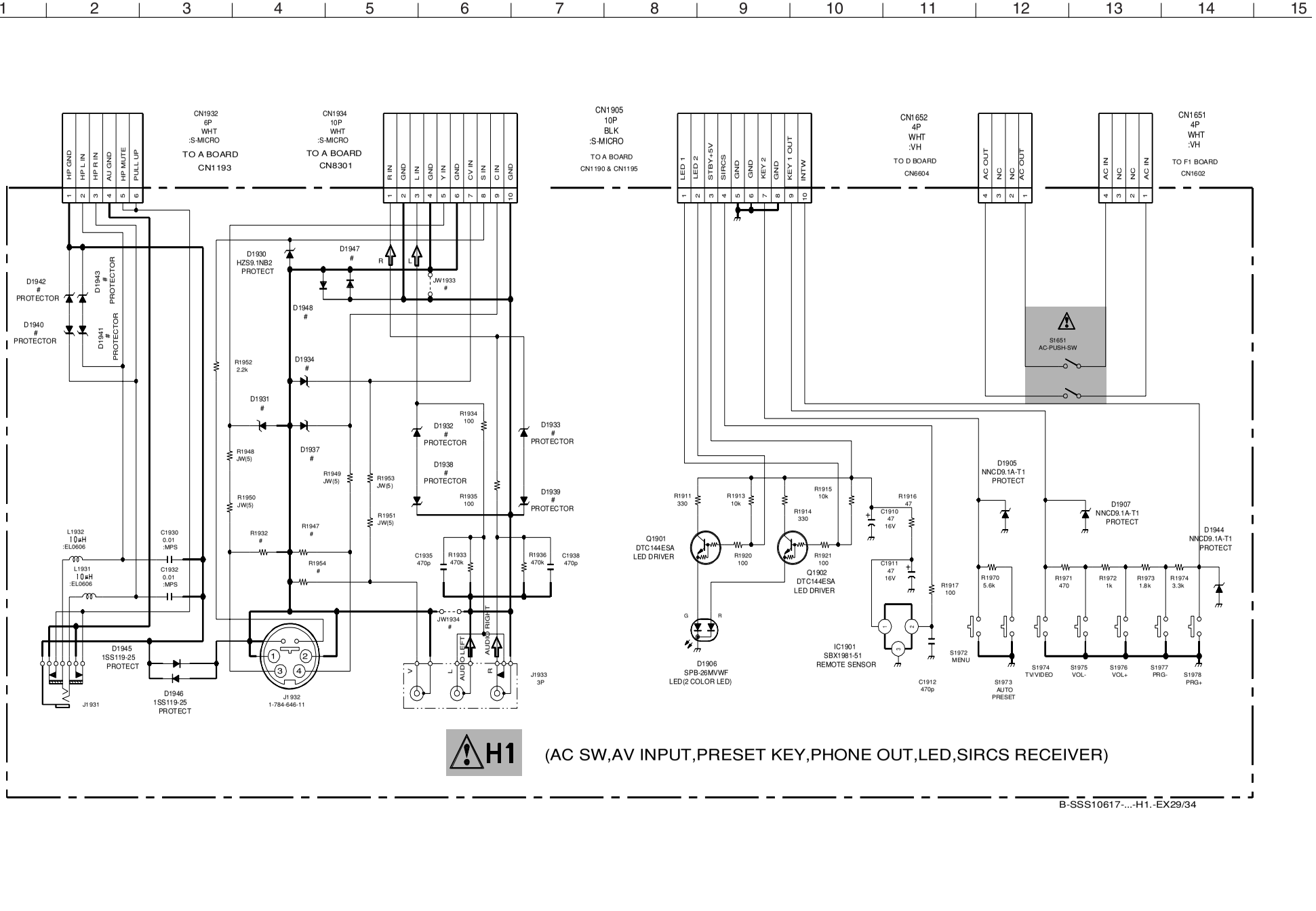
KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65
RM-964

(9) Schematic Diagram of H1 Board



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KV-EX29M39/EX29M87/EX34M97
RM-963
KV-EX29M93/EX29M65

D1 Board ✲ Mark List

	KV-EX29M39	KV-EX29M93	KV-EX29M65	KV-EX29M87	KV-EX34M97
C4816	10P :CHIP	10P :CHIP	10P :CHIP	10P :CHIP	#
C4818	2.2	2.2	2.2	2.2	10
C6125	22 25V	22 25V	22 25V	22 25V	47 16V
R4831	4.7K :RN-CP	4.7K :RN-CP	4.7K :RN-CP	4.7K :RN-CP	3.3K :RN-CP
R4839	8.2K :RN-CP	8.2K :RN-CP	8.2K :RN-CP	8.2K :RN-CP	6.8K :RN-CP
R4844	3.9K :RN-CP	3.9K :RN-CP	3.9K :RN-CP	3.9K :RN-CP	4.7K :RN-CP
R4849	33K :CHIP	33K :CHIP	33K :CHIP	33K :CHIP	82K :CHIP
R4854	5.6K :CHIP	5.6K :CHIP	5.6K :CHIP	5.6K :CHIP	3.3K :CHIP
R4855	4.7K :CHIP	4.7K :CHIP	4.7K :CHIP	4.7K :CHIP	15K :CHIP
R4857	4.7K :RN-CP	4.7K :RN-CP	4.7K :RN-CP	4.7K :RN-CP	22K :RN-CP
R4859	8.2K :RN-CP	8.2K :RN-CP	8.2K :RN-CP	8.2K :RN-CP	2.7K :RN-CP
R4860	100 :RN-CP	100 :RN-CP	100 :RN-CP	100 :RN-CP	2.7K :RN-CP
R4862	10K :RN-CP	10K :RN-CP	10K :RN-CP	10K :RN-CP	15K :RN-CP
R4871	30K :RN-CP	30K :RN-CP	30K :RN-CP	30K :RN-CP	100K :RN-CP
R4878	150K :CHIP	150K :CHIP	150 :CHIP	150K :CHIP	180K :CHIP
R4882	9.1K :RN-CP	9.1K :RN-CP	9.1K :RN-CP	9.1K :RN-CP	68K :RN-CP
R6112	68K :RN-CP	68K :RN-CP	68K :RN-CP	68K :RN-CP	56K :RN-CP
R6131	27K :RN-CP	27K :RN-CP	27K :RN-CP	27K :RN-CP	4.7K :RN-CP
R6139	7.5K :RN-CP	7.5K :RN-CP	7.5K :RN-CP	7.5K :RN-CP	4.3K :RN-CP
R6144	270K :RN-CP	270K :RN-CP	270K :RN-CP	270K :RN-CP	120K :RN-CP
R6154	6.8K :RN-CP	6.8K :RN-CP	6.8K :RN-CP	6.8K :RN-CP	10K :RN-CP
R6159	5.6K :RN-CP	5.6K :RN-CP	5.6K :RN-CP	5.6K :RN-CP	6.8K :RN-CP
R6195	10K :RN-CP	10K2 :RN-CP	10K :RN-CP	10K :RN-CP	5.6K :RN-CP
R6197	#	#	#	#	0 :CHIP
R6200	75K :RN-CP	75K :RN-CP	75K :RN-CP	75K :RN-CP	180K :RN-CP
R6457	22K :RN-CP	22K :RN-CP	22K :RN-CP	22K :RN-CP	39K :RN-CP

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

DH Board ✲ Mark List

	KV-EX29M39	KV-EX29M93	KV-EX29M65	KV-EX29M87	KV-EX34M97
C3801	#	#	#	#	10 50V
C3804	#	#	#	#	0.01 50V
C3805	#	#	#	#	10 50V
C3807	#	#	#	#	0.01 50V
C3816	#	#	#	#	10 50V
C3819	#	#	#	#	1 50V
C3822	#	#	#	#	0.1 50V
CN3802	#	#	#	#	4P
CN3804	#	#	#	#	3P
D3805	#	#	#	#	1SS119-25
IC3805	#	#	#	#	LA6510
IC3807	#	#	#	#	SENSOR UNIT, MAGNETIC
Q3807	#	#	#	#	DTC144ESA
Q3808	#	#	#	#	DTC144ESA
Q3809	#	#	#	#	2SC2785-HFE
Q3810	#	#	#	#	2SA1175-HFE
Q3811	#	#	#	#	2SC2785-HFE
Q3812	#	#	#	#	2SC2785-HFE
R3802	#	#	#	#	1K
R3803	#	#	#	#	1K
R3804	#	#	#	#	9.1K
R3805	#	#	#	#	2.7K
R3807	#	#	#	#	470
R3808	#	#	#	#	150K
R3810	#	#	#	#	4.7K
R3814	#	#	#	#	330
R3823	#	#	#	#	15
R3825	#	#	#	#	1K
R3828	#	#	#	#	0.47
R3839	#	#	#	#	10K
R3845	#	#	#	#	4.7K
R3846	#	#	#	#	1K
R3847	#	#	#	#	100
R3848	#	#	#	#	1K
R3849	#	#	#	#	0.47
R3852	#	#	#	#	100K
R3854	#	#	#	#	10K

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

A Board ✲ Mark List

	KV-EX29M39	KV-EX29M93	KV-EX29M65	KV-EX29M87	KV-EX34M97
C3330	0.1 16V :CHIP	#	#	0.1 16V :CHIP	0.1 16V :CHIP
C3331	100 16V	#	#	100 16V	100 16V
C3336	100 16V	#	#	100 16V	100 16V
C3338	470P :CHIP	#	#	470P :CHIP	470P :CHIP
C3350	470P :CHIP	#	#	470P :CHIP	470P :CHIP
C3351	470P :CHIP	#	#	470P :CHIP	470P :CHIP
C3352	470P :CHIP	#	#	470P :CHIP	470P :CHIP
C3353	100 16V	#	#	100 16V	100 16V
C3354	47	#	#	47	47
C3355	47	#	#	47	47
C4303	0.22 16V :CHIP	0.22 16V :CHIP	0.22 16V :CHIP	0.22 16V :CHIP	0.1 25V :CHIP
C4366	0.01 :CHIP	0.01 :CHIP	0.01 :CHIP	0.01 :CHIP	0.047 :CHIP
C4367	0.033 :CHIP	0.033 :CHIP	0.033 :CHIP	0.033 :CHIP	0.1 25V :CHIP
C4380	0.022 :CHIP	0.022 :CHIP	0.022 :CHIP	0.022 :CHIP	#
CN1118	20P	#	20P	#	#
CN1120	#	#	#	#	TAB(CONTACT)
CN1121	#	#	#	#	TAB(CONTACT)
CN1138	#	#	#	#	4P
CN8402	20P	#	#	20P	20P
JR109	#	#	#	0 :CHIP	#
JR1301	0 :CHIP	#	#	0 :CHIP	0 :CHIP
L3302	10uH	#	#	10uH	10uH
L3303	10uH	#	#	10uH	10uH
L3304	10uH	#	#	10uH	10uH
L3305	10uH	#	#	10uH	10uH
L3306	10uH	#	#	10uH	10uH
Q3300	2SA1037AK-T146	#	#	2SA1037AK-T146	2SA1037AK-T146
Q4318	2SC2712-YG	2SC2712-YG	2SC2712-YG	2SC2712-YG	#
R119	47 :CHIP	47 :CHIP	47 :CHIP	47 :CHIP	#
R120	#	100 :CHIP	#	100 :CHIP	100 :CHIP
R121	47 :CHIP	47 :CHIP	47 :CHIP	47 :CHIP	#
R122	#	100 :CHIP	#	100 :CHIP	100 :CHIP
R3300	560 :CHIP	#	#	560 :CHIP	560 :CHIP
R3304	470 :CHIP	#	#	470 :CHIP	470 :CHIP
R3320	10K :CHIP	#	#	10K :CHIP	10K :CHIP
R3323	100 :CHIP	#	#	100 :CHIP	100 :CHIP
R3334	100 :CHIP	#	#	100 :CHIP	100 :CHIP
R3362	100 :CHIP	#	#	100 :CHIP	100 :CHIP
R3374	0 :CHIP	#	#	0 :CHIP	0 :CHIP
R4306	#	100 :CHIP	#	100 :CHIP	100 :CHIP
R4307	#	100 :CHIP	#	100 :CHIP	100 :CHIP
R4402	2.2M :CHIP	2.2M :CHIP	2.2M :CHIP	2.2M :CHIP	#
R4403	1K :CHIP	1K :CHIP	1K :CHIP	1K :CHIP	#
R4404	22K :RN-CP	22K :RN-CP	22K :RN-CP	22K :RN-CP	#
R4406	100K :CHIP	100K :CHIP	100K :CHIP	100K :CHIP	#
R4411	12K :RN-CP	12K :RN-CP	12K :RN-CP	12K :RN-CP	39K :RN-CP
R4413	91K :RN-CP	91K :RN-CP	91K :RN-CP	91K :RN-CP	220K :RN-CP
R4520	#	100 :CHIP	#	100 :CHIP	#
R4521	#	100 :CHIP	#	100 :CHIP	#
R8321	100 :CHIP	#	100 :CHIP	#	#
R8331	100 :CHIP	#	100 :CHIP	#	#
R8332	100 :CHIP	#	100 :CHIP	#	#
R8333	100 :CHIP	#	100 :CHIP	#	#
TU101	BTF-WG442	BTF-WG441	BTF-WG441	BTF-LG434	BTF-WG442
TU3301	BTF-LG436	#	#	BTF-LG436	BTF-LG436

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

D Board ✲ Mark List

	KV-EX29M39/EX29M93/EX29M65	KV-EX29M87	KV-EX34M97
C6606	#	100P :CHIP	#
C6609	#	1	#
C6610	#	100P :CHIP	#
C6611	#	0.001	#
C6621	1200 250V	#	1200 250V
C6622	1200 250V	#	1200 250V
C6680	#	#	1 450V
C6681	#	#	1 450V
C6624	#	#	33 50V
C6816	0.047 400V :PP	0.047 400V :PP	0.068 400V :PP
C6828	0.001 200V	0.001 200V	0.01 200V
C6829	100P 2KV	100P :2KV	330P 2KV
C6830	#	#	1000P 1.2KV :MPS
C6831	6200P 1.5KV :MPS	6200P 1.5KV :MPS	8200P 1.5KV :MPS
C6832	6800P 1.5KV :MPS	6800P 1.5KV :MPS	0.12 1.5KV :MPS
C6841	#	#	0.12 250V
C6842	0.47 250V :PP	0.47 250V :PP	1.5 250 :PP
C6845	0.22 250V :PP	0.22 250V :PP	0.27 250V :PP
C6846	0.18 250V :PP	0.18 250V :PP	0.22 250V :PP
C6852	0.0022 50V	#	0.0022 50V
C6860	220P 2KV	220P 2KV	150P 2KV
C6869	#	#	100 16V
C6870	#	#	470 25V
C6874	0.1 50V	0.1 50V	#
C6880	0.1 25V :CHIP	0.1 25V :CHIP	0.01 :CHIP
C6885	220P 2KV :PP	220P 2KV :PP	#
CN6804	3P	3P	#
D6602	#	MA111- (K8).S0	#
D6603	#	MA111- (K8).S0	#
D6604	#	MA111- (K8).S0	#
D6609	#	1SS119-25	#
D6610	#	MA111- (K8).S0	#
D6611	#	MA111- (K8).S0	#
D6612	#	U05G	#
D6613	#	U05G	#
D6621	#	#	MA111-(K8).S0
D6653	#	#	U05G
D6648	#	RD12ES-B1	#
D6822	#	#	RN4Z
IC6806	#	#	PQ6RD83B
L6801	4.7mH	4.7mH	3.3uH
L6803	2.2mH	2.2mH	680uH

	KV-EX29M39/EX29M93/EX29M65	KV-EX29M87	KV-EX34M97
Q6602	#	2SC2785TP-HFE	#
Q6802	IRF720-LF49	IRF720-LF49	IRF1740G
R6605	#	20K :RN	#
R6606	#	75K :RN	#
R6607	#	680K :RN	#
R6608	#	680K :RN	#
R6609	#	680K :RN	#
R6610	#	100K :CHIP	#
R6612	#	120K :RN	#
R6613	#	680K :RN	#
R6614	#	680K :RN	#
R6615	#	680K :RN	#
R6616	#	100K :CHIP	#
R6617	#	390K :CHIP	#
R6618	#	75K :RN	#
R6619	#	470K :CHIP	#
R6620	#	470K :CHIP	#
R6621	#	10K :CHIP	#
R6623	#	150 1W :RS	#
R6640	#	22K :CHIP	#
R6641	#	470K 1/2W	#
R6642	#	470K :1/2W	#
R6643	#	22K :CHIP	#
R6714	#	#	47K :CHIP
R6804	3.9K :CHIP	3.9K :CHIP	3.6K :CHIP
R6806	3.9K :CHIP	3.9K :CHIP	3.6K :CHIP
R6826	2.7K 2W :RS	2.7K 2W :RS	2.2K 2W :RS
R6827	3.3K 2W :RS	3.3K 2W :RS	2.7K 2W :RS
R6845	180K :RN-CP	180K :RN-CP	56K :CHIP
R6855	27K 1/2W :RN	27K 1/2W :RN	24K 1/2W :RN
R6858	27K 1/2W :RN	27K 1/2W :RN	24K 1/2W :RN
R6865	180K :CHIP	180K :CHIP	150K :CHIP
R6866	3.3K :RN	3.3K :RN	2.7K :RN
R6869	560K :CHIP	560K :CHIP	470K :CHIP
R6876	1.5 3W :RS	1.5 3W :RS	0.47 1/2W
R6881	22K :RN	22K :RN	12K :RN
R6882	30K :RN	30K :RN	22K :RN
RY6602	#	RELAY, AC POWER	#
VD6601	#	VARISTOR	#
T6803	NX-4522	NX-4522	NX-4601

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

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8-3. VOLTAGE MEASUREMENTS

A (1/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC001	1	4.8
	2	0
	3	0
	4	0.8
	5	0.8
	6	0
	7	0.4
	8	0
	9	4.9
	10	0
	11	2.2
	12	✻ <2.2>
	13	4.9
	14	4.9
	15	0.6<1.6>
	16	0.5<1.6>
	17	2.4
	18	1.0
	19	4.9
	20	0
	21	0
	22	4.9
	23	0
	24	0.5<1.6>
	25	0
	26	0
	27	4.9
	28	0
	29	4.8
	30	4.9
	31	4.9
	32	0
	33	0
	34	0
	35	4.9
	36	0
	37	0
	38	2.5
	39	2.5
	40	4.7
	41	4.9
	42	0
	43	0.5<1.6>
	44	0.6
	45	0
	46	0
	47	4.9
	48	4.7
	49	4.9
	50	4.6
	51	0
	52	2.6
	53	0
	54	4.5<0>
	55	0.1
	56	0
	57	0
	58	0
	59	0
	60	0
	61	0
	62	4.4
	63	0.4
	64	4.8
IC002	1	0
	2	4.9
	3	4.9
	4	7.0
	5	4.9
	6	0
	7	0.9
IC003	1	0
	2	0
	3	0
	4	0
	5	4.9
	6	4.9
	7	0
	8	4.9
IC004	1	0
	2	0
	3	4.9(0)
	4	0
	5	0
	6	4.9
	7	0
	8	0<(4.9)>
IC100	1	4.9
	2	4.9
	3	0
IC1200	1	4.5
	2	4.5
	3	4.5
	4	0
	5	4.5[4.9]
	6	4.5
	6	4.5
	7	4.5[0]
	8	9.0[0]
IC1201	1	0
	2	0(0.9)
	3	1.2[0]
	4	4.5
	5	4.5
	6	4.5
	7	4.5
	8	4.5
	9	4.5
	10	4.5
	11	4.5
	12	4.5
	13	0.6[0]
	14	2.5
	15	9.0[0.2]
	16	4.6
	17	4.6
	18	2.8
	19	0.6[0]
	20	4.5
	21	4.5
	22	4.5
	23	4.5
	24	4.5
	25	4.5
	26	4.5
	27	4.5
	28	4.5
	29	0<[(4.5)]>
	30	3.2[0]
	31	4.5[3.3]
	32	4.4
IC1203	1	4.5
	2	0<(4.5)>
	3	4.5(0)
	4	0
	5	4.5
	6	4.5
	7	4.5
	8	9.0
IC1204	1	0
	2	0
	3	27.5
	4	0
	5	0
	6	0.6[3.5]
	7	13.6
	8	1.4(0.1)[3.5]<0.9>
	9	0
	10	28.3
	11	13.2
	12	13.4
IC1205	1	4.5
	2	4.5
	3	4.5
	4	4.5
	5	4.9
	6	0.4
	7	0
	8	0.2
	9	0.2
	10	0.2
	11	0.2
	12	0.2[0]
	13	4.9
	14	9.0
IC1206	1	✻
	2	✻
	3	✻
	4	✻
	5	✻
	6	✻
	7	✻
	8	✻
	9	4.5
	10	4.5
	11	4.5
	12	4.5
	13	4.5
	14	4.5
	15	4.5
	16	4.5

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A (2/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC1207	1	0
	2	0
	3	0
	4	0.1
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0
	12	0
	13	0
	14	0
	15	0
IC2200	1	4.5
	2	4.5
	3	4.3
	4	0
	5	4.2[0]
	6	0<4.5>
	7	4.6
	8	9.1
IC2300	1	0.9
	2	2
	3	1.3
	4	0
	5	4.9
	6	4.9
	7	1.5
	8	0
	9	0.6
	10	3.6<0>
	11	0<4.9>
	12	1.4
	13	0
	14	1.5
	15	0
	16	1.5
IC2600	I	13.0
	G	9.1
	O	0
IC2601	I	7.5
	G	0
	O	5.0
IC2603	I	7.3
	G	0
	O	3.3
IC2604	1	1.2
	2	2.6
	3	4.8
IC4301	1	4.0
	2	0
	3	4.4
	4	4.7
	5	3.5
	6	3.4(0)
	7	7.6
	8	0
	9	0
	10	0.4
	11	1.8
	12	0<(9.1)>
	13	1.0
	14	5.1
	15	2.6
	16	0
	17	3.5
	18	2.7
	19	4.2
	20	0
	21	0<(6.3)>
	22	1.7
	23	6.5<(0)>
	24	0
	25	0
	26	2.4
	27	3.3
	28	2.6
	29	2.6
	30	2.4
	31	3.3
	32	9.1
	33	0
	34	4.8
	35	4.8
	36	4.8
	37	9.1
	38	0
	39	0<(4.3)>
	40	4.3
	41	4.3
	42	0
	43	0
	44	0
	45	0<(6.6)>
	46	0<(9.1)>
	47	9.1
	48	6.0
	49	2.6
	50	4.1
	51	0
	52	0
	53	6.0
	54	6.0
	55	0
	56	6.0
	57	6.0
	58	6.0
	59	0.4
	60	0
	61	4.6
	62	0<(4.6)>
	63	4.4
	64	3.6
IC8302	1	4.4
	2	4.5
	3	4.0
	4	0<(4.5)>
	5	4.4
	6	0.1
	7	5.0
	8	4.0
	9	4.5
	10	0<(4.2)>
	11	0.3
	12	4.4
	13	0.1
	14	5.0
	15	4.0
	16	4.5
	17	4.2
	18	4.5
	19	4.4
	20	0.1
	21	0<(5.0)>
	22	4.0
	23	4.5
	24	4.0
	25	4.5
	26	4.4
	27	0.1
	28	5.0
	29	4.5
	30	0<(4.5)>
	31	4.5
	32	0
	33	4.6
	34	4.6
	35	0
	36	0
	37	4.4
	38	4.5
	39	3.8
	40	4.5
	41	4.5
	42	9.0
	43	4.5
	44	4.3
	45	4.5
	46	3.8
	47	0<(4.4)>
	48	0
	49	4.2
	50	4.5
	51	4.4
	52	4.5
	53	4.5
	54	4.5
	55	0<(3.8)>
	56	3.2
	57	0
	58	0<(4.3)>
	59	4.5
	60	4.2
	61	4.5
	62	4.5
	63	4.3
	64	4.5

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A (3/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC8305	I	13.1
	G	0
	O	9.1
IC8306	1	0(2.2)
	2	0.1<(1.9)>
	3	0<(1.6)>
	4	0.1
	5	2.6
	6	4.9
	7	2.6
	8	0
	9	0.3
	10	0.9
	11	2.5
	12	4.9
	13	4.6
	14	4.6
	15	0
	16	0
	17	2.5
	18	2.5
	19	1.4
	20	2.3
	21	1.8
	22	1.8
	23	0<(1.8)>
	24	0.1
	25	0<(1.9)>
	26	0<(1.9)>
	27	0<(1.9)>
	28	0
	29	0(2.0)
	30	0(2.0)<1.6>
	31	0(1.2)
	32	0.1<(4.9)>
	33	0.1<(2.5)>
	34	0<(2.5)>
	35	0 <(2.50>
	36	0
	37	0<(1.1)>
	38	3.9
	39	1.8
	40	3.3
	41	0<(2.3)>
	42	0
	43	0
	44	0<(2.3)>
	45	3.6
	46	2.3
	47	0<(3.6)>
	48	1.7
IC8309	1	3.0
	2	5.3
	3	2.8
	4	0
	5	0
	6	9.0
	7	2.0
	8	0
IC8310	1	0.8
	2	0
	3	0
	4	0
	5	0
	6	2.0
	7	0
	8	5.0
	9	5.85
	10	0
	11	4.6
	12	0
	13	0
	14	4.6
	15	5.1
	16	2.5
	17	2.5
	18	0
	19	2.9
	20	8.2
	21	2.5
	22	0.2
	23	0
	24	0
IC8312	1	4.9
	2	0.3
	3	0
	4	0
	5	4.9
Q001	B	4.9
	C	0
	E	0.6
Q002	B	0
	C	4.9
	E	0
Q003	B	0.4
	C	4.9
	E	0.3
Q004	B	0.1
	C	0
	E	0
Q005	B	1.6
	C	0
	E	2.2
Q006	B	1.8
	C	0
	E	2.4
Q007	B	1.8
	C	0
	E	2.4
Q101	B	2.8[0]
	C	0
	E	3.4
Q301	B	0<(12.9)>
	C	0
	E	12.3
Q313	B	*
	C	*
	E	*
Q1203	B	0
	C	5.0
	E	0.2<[0]>
Q1204	D	0
	G	0
	S	0
Q1205	B	0<5.5>
	C	0<9.0>
	E	0<(4.9)>
Q1206	B	2.9
	C	5.5[(0)]
	E	2.3[0]
Q1207	B	28.0
	C	0
	E	18.1
Q1208	B	0
	C	13.2
	E	0
Q1209	B	0
	C	13.2
	E	0
Q1210	B	0
	C	13.4[0]
	E	0
Q1211	B	9.0
	C	0
	E	9.0
Q1215	B	0
	C	0<(9.0)>
	E	0
Q2200	B	0
	C	0
	E	0
Q2201	B	0
	C	0
	E	0
Q2304	B	3.6<0>
	C	0<4.9>
	E	0
Q2305	B	2.3<3.1>
	C	4.9
	E	1.5<2.3>
Q2306	B	0.8
	C	0
	E	1.5
Q3300	B	4.6[0]
	C	0
	E	4.6
Q4300	B	6.2
	C	9.1
	E	5.5[0]
Q4301	B	-11.9
	C	1.7
	E	-11.7
Q4302	B	0
	C	11.7
	E	0.6[0]
Q4303	B	0.3[0]
	C	1.6[3.2]
	E	0
Q4304	B	7.1
	C	9.1
	E	6.5

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A (4/4) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q4307	B	2.8[0]	Q4826	B	*	Q8331	B	2.4
	C	0[4.5]		C	*		C	6.4
	E	0		E	[		E	1.8
Q4308	B	2.5	Q8301	B	4.5	Q8332	B	6.4
	C	0		C	0		C	9.0
	E	3.2		E	5.2		E	5.8
Q4310	B	2.4	Q8302	B	4.4	Q8333	B	2.5
	C	0		C	9.0		C	7.1<6.7>
	E	0<(3.1)>		E	3.8		E	1.9
Q4311	B	5.5	Q8303	B	4.4	Q8334	B	4.4
	C	0		C	9.0		C	9.0
	E	6.2		E	3.7		E	3.8
Q4312	B	8.0	Q8304	B	4.4	Q8335	B	2.5
	C	1.4		C	9.0		C	7.1[(6.7)]
	E	8.6		E	3.8		E	1.9
Q4313	B	*	Q8306	B	4.2	Q8336	B	4.4
	C	*		C	9.0		C	9.0
	E	*		E	3.6		E	3.8
Q4314	B	0.9	Q8308	B	3.8	Q8337	B	0
	C	0		C	9.0		C	9.0
	E	1.6		E	3.1		E	0
Q4315	B	3.2<3.5>	Q8309	B	4.4	Q8344	B	0
	C	0		C	9.0		C	0
	E	0		E	3.8		E	0.7
Q4316	B	3.0[2.5]	Q8310	B	0.1	Q8351	B	2.9
	C	4.5[0]		C	4.9		C	8.4
	E	3.2		E	0.1[0]		E	2.3
Q4317	B	0[3.1]	Q8319	B	0<(1.8)>	Q8352	B	8.4
	C	4.5		C	0		C	3.7
	E	0[3.2]		E	2.4		E	9.0
Q4319	B	6.5	Q8320	B	1.8	Q8358	B	0
	C	1.9		C	0		C	0
	E	7.1		E	2.4		E	0
Q4320	B	1.6	Q8321	B	1.7	Q8359	B	0
	C	0		C	0		C	0
	E	2.2		E	2.3		E	0
Q4321	B	1.8	Q8326	B	0.2	Q8360	B	0
	C	0		C	3.4		C	0
	E	2.4		E	0		E	0
Q4322	B	1.8	Q8327	B	3.5	Q8361	B	3.0
	C	0		C	0.2		C	4.9
	E	2.4		E	0		E	2.4
Q4823	B	1.1	Q8328	B	0.2	Q8362	B	3.0
	C	0		C	5.3		C	4.9
	E	1.7		E	0		E	2.4
Q4824	B	*	Q8329	B	2.4	Q8363	B	3.0
	C	*		C	5.6		C	5.0
	E	*		E	1.8		E	2.4
Q4825	B	0<-1.0>	Q8330	B	5.6	Q8364	B	1.6
	C	9.1<(0)>		C	9.0		C	0
	E	0.8<(0)>		E	5.0		E	2.2

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D1 (1/2) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC4800	1	0.3
	2	4.4
	3	4.5
	4	0
	5	4.5
	6	3.4
	7	0.4
	8	9.0
IC4801	1	0.3
	2	4.4
	3	4.5
	4	0
	5	4.5
	6	3.1
	7	0.4
	8	9.0
IC4802	1	4.5
	2	4.5
	3	4.5
	4	0
	5	0.8
	6	0.7
	7	3.5
	8	9.0
IC6101	1	2.6
	2	2.0
	3	2.1
	4	0
	5	2.1
	6	2.4
	7	2.6
	8	5.0
IC6102	1	0
	2	1.7
	3	1.8
	4	0
	5	5.0
	6	4.5
	7	4.5
	8	9.0
IC6103	1	2.9
	2	1.6
	3	1.4
	4	0
	5	1.1
	6	4.0
	7	1.2
	8	9.0
IC6104	1	2.0
	2	2.4
	3	-15.4
	4	1.4
	5	6.7
IC6105	1	5.5
	2	1.1
	3	2.0
	4	0.3
	5	1.7
	6	0.9
	7	2.0
	8	0.3
IC6106	1	2.5
	2	0
	3	8.9
IC6107	1	4.6
	2	0
	3	9.0
	4	0
	5	4.5
	6	4.5
	7	0
	8	6.5
IC6108	1	2.5
	2	2.6
	3	2.4
	4	0.8
	5	2.4
	6	1.4
	7	1.9
	8	2.8
	9	1.2
	10	3.1
	11	2.0
	12	2.5
	13	0
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0
	20	4.6
	21	4.6
	22	5.0
	23	0
	24	0
IC6201	1	0
	2	0
	3	0
	4	-21.7
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	2.17
	12	0
	13	5.0
	14	5.0
IC6202	1	3.5
	2	3.5
	3	3.4
	4	0
	5	3.4
	6	3.4
	7	3.4
	8	9.0
IC6351	1	5.2
	2	4.4
	3	4.8
	4	0
	5	4.1
	6	4.5
	7	0.4
	8	9.0
IC6353	I	11.0
	G	0
	O	0
IC6354	1	4.6
	2	0
	3	9.0
	4	0
	5	4.5
	6	4.5
	7	0
	8	3.4
IC6356	1	-2.8
	2	-6.3
	3	-3.0
	4	-3.3
	5	-15.0
	6	-3.5
	7	-3.0
	8	-4.0
	9	-4.1
	10	11.7
Q4800	B	1.2
	C	3.3
	E	0
Q4801	B	0.6
	C	5.6
	E	0
Q4802	B	1.3
	C	4.4
	E	0
Q4803	B	0
	C	8.9
	E	5.1
Q4804	B	0.4
	C	3.8
	E	0
Q4805	B	0.3
	C	4.8
	E	0
Q4806	B	0.4
	C	3.9
	E	0
Q4807	B	0
	C	4.8
	E	0
Q4808	B	0
	C	4.2
	E	3.2

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D1 (2/2) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q4809	B	0.5	Q4821	B	4.3	Q6125	B	1.5
	C	0.8		C	0		C	8.9
	E	0		E	0		E	1.6
Q4810	B	0.1	Q4822	B	0	Q6126	B	1.5
	C	8.9		C	0		C	0
	E	0.4		E	0		E	1.6
Q4811	B	0	Q6103	D	30.2	Q6128	B	1.1
	C	8.9		G	4.4		C	8.9
	E	0.2		S	0		E	2.8
Q4812	B	1.4	Q6104	B	0.6	Q6201	B	0.4
	C	0		C	2.9		C	4.8
	E	0.8		E	0		E	0
Q4813	B	2.6	Q6105	B	3.4	Q6202	B	-0.6
	C	0		C	5.0		C	2.6
	E	0.8		E	2.9		E	0
Q4814	B	1.8	Q6106	B	2.5	Q6203	B	-6.0
	C	0		C	-3.3		C	-2.3
	E	0.7		E	3.1		E	-6.6
Q4815	B	1.4	Q6107	B	10.8	Q6350	B	0.4
	C	0		C	4.8		C	2.1
	E	0.7		E	11.1		E	0
Q4816	B	1.8	Q6108	B	1.7	Q6356	B	0.4
	C	0		C	0		C	1.7
	E	2.4		E	2.4		E	0
Q4817	B	3.9	Q6118	B	0	Q6405	B	-0.6
	C	8.9		C	4.1		C	-4.5
	E	3.3		E	0		E	0
Q4818	B	3.3	Q6124	B	0	Q6455	B	2.6
	C	0		C	1.5		C	8.9
	E	3.9		E	0		E	1.9
Q4820	B	4.5						
	C	0						
	E	5.2						

C BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC9001	1	3.4		7	139.8[134]		9	159
	2	11.7		8	160(158)[137]		10	156
	3	3.3		9	139.3(133)	Q9001	B	8.3
	4	-0	IC9003	1	3.44(3.34)		C	0
	5	8.6(8.3)[8.8]		2	11.72		E	4.5
	6	199.3(198.8)		3	3.36	Q9009	B	3.0
	7	148.7(144)		4	-0(0.12)		C	0
	8	157.2(159)[154]		5	8.5		E	3.6
	9	148.3(144)[147]		6	198	Q9010	B	3.2
IC9002	1	3.4		7	145.5(141)		C	0
	2	11.7		8	160		E	3.8
	3	3.3		9	143.9	Q9011	B	2.9
	4	-0	J9001	3	520		C	0
	5	8.49(8.24)[8.55]		5	22.2(22.2)[-0]		E	3.6
	6	199.3(198)		8	160			

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B3 (1/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC501	1	0		60	1.5		31	0
	2	0		61	3.4		32	0
	3	0		62	0		33	0
	4	0		63	0		34	3.3
	5	0		64	0		35	1.5
	6	0.6	IC504	1	0		36	0.5
	7	0.2		2	0		37	0
	8	1.2		3	0		38	3.3
	9	0.		4	3.3		39	1.6
	10	1.5		5	1.6		40	1.4
	11	0		6	2.0		41	0
	12	1.3		7	0		42	1.4
	13	0		8	0		43	1.7
	14	3.3		9	0		44	3.3
	15	-0		10	0		45	1.6
	16	3.3		11	0		46	1.5
	17	1.2		12	2.1		47	0
	18	1.6		13	2.2		48	1.3
	19	1.8		14	0		49	0.8
	20	1.6	IC505	1	0		50	0
	21	2.0		2	3.2	IC603	1	0
	22	1.9		3	4.8		2	0
	23	1.7		4	4.8		3	1.2
	24	1.8		5	0		4	0.2
	25	-0	IC506	1	0		5	1.3
	26	4.8		2	3.0		6	1.3
	27	2.4		3	0		7	0
	28	0		4	0		8	0
	29	3.4		5	0		9	0
	30	4.8	IC602	1	3.3		10	0
	31	2.4		2	1.5		11	0
	32	0		3	1.4		12	1.3
	33	1.4		4	0		13	0
	34	0		5	1.1		14	3.3
	35	0		6	1.6	IC604	1	4.9
	36	1.4		7	3.3		2	0
	37	1.4		8	1.5		3	0
	38	0		9	1.4		4	0.3
	39	0		10	0		5	0.3
	40	0		11	1.4		6	0.4
	41	0		12	0.9		7	0.3
	42	0		13	3.3		8	0
	43	0		14	0.5		9	3.2
	44	0		15	3.2		10	3.2
	45	4.8		16	0		11	0
	46	0		17	3.1		12	4.9
	47	0		18	3.1		13	0
	48	0		19	0		14	4.6
	49	0		20	0		15	4.6
	50	2.4		21	0		16	4.9
	51	4.8		22	0			
	52	3.4		23	0			
	53	2.4		24	0			
	54	0		25	3.3			
	55	0		26	0			
	56	1.4		27	0			
	57	0		28	0			
	58	0		29	0			
	59	0		30	0			

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B3 (2/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC601	1	2.3		73	0		137	1.8
	2	0		74	2.4		138	0
	3	0		66	0		139	1.7
	4	0		67	3.3		140	1.3
	5	0		68	0		141	2.4
	6	0		69	0.3		142	0
	7	0		70	0		143	3.3
	8	0		71	0		144	0
	9	0		72	3.3		145	1.1
	10	0.4		73	0		146	0.9
	11	0		74	2.4		147	1.4
	12	0		75	0		148	1.4
	13	0		76	0		149	1.5
	14	0		77	0		150	1.8
	15	0		78	3.3		151	1.4
	16	0		79	3.3		152	1.7
	17	0		80	0.3		153	1.6
	18	0		81	0.4		154	1.7
	19	0		82	3.2		155	0
	20	1.5		83	0		156	0.1
	21	0		84	0		157	3.2
	22	0		85	3.3		158	0.9
	23	3.3		86	0.3		159	0.9
	24	0		87	3.3		160	1.3
	25	0		88	0		161	1.3
	26	0		89	0		162	0
	27	1.6		90	0		163	0
	28	0		91	1.6		164	1.5
	29	0		92	1.6		165	1.5
	30	0		93	0		166	1.7
	31	0		94	2.4		167	1.9
	32	1.6		95	1.6		168	1.4
	33	3.2		96	0		169	1.6
	34	-0		97	2.0		170	1.5
	35	0		98	3.0		171	1.5
	36	0		99	0		172	2.4
	37	0		100	0		173	0
	38	0		101	0		174	1.7
	39	0		102	0.2		175	1.4
	40	0		103	2.4		176	1.0
	41	0		104	0		177	1.5
	42	0		105	0.3		178	1.8
	43	2.3		106	1.0		179	0
	44	0		107	1.2		180	1.2
	45	1.2		108	1.0		181	0.6
	46	0		109	0.5		182	0
	47	0		110	2.2		183	0
	48	0		111	3.3		184	2.6
	49	0		112	0		185	2.6
	50	0		113	0.5		186	2.6
	51	0		114	3.3		187	2.6
	52	0		115	3.3		188	0
	53	0		116	2.4		189	0.3
	54	3.3		117	1.5		190	0
	55	0		118	0		191	0.3
	56	0		119	0		192	0
	57	2.9		120	1.1		193	0.3
	58	2.9		121	1.1		194	0
	59	0		122	1.3		195	0.3
	60	0		123	1.3		196	0.3
	61	0		124	1.5		197	2.3
	62	0		125	1.5		198	0
	63	2.9		126	2.0		199	0.3
	64	2.9		127	1.3		200	0.3
	65	0		128	1.1		201	0.3
	66	0		129	0.1		202	0.3
	67	3.3		130	0.1		203	0.3
	68	0		131	1.0		204	0.3
	69	0.3		132	0.9		205	0
	70	0		133	1.8		206	0.3
	71	0		134	1.8		207	3.3
	72	3.3		135	2.3		208	0
				136	2.2			

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B3 (3/3) BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q501	B	0.0	Q521	B	4.8	Q902	B	0
	C	2.9		C	2.4		C	0.8
	E	2.2		E	3.1		E	0.2
Q502	B	4.8	Q522	B	4.8	Q903	B	0.7
	C	2.1		C	3.1		C	0.8
	E	2.8		E	3.7		E	0.2
Q503	B	4.8	Q523	B	4.8	Q907	B	0
	C	2.1		C	3.0		C	1.2
	E	2.7		E	0		E	0.5
Q516	B	4.0	Q601	B	4.0	Q908	B	0
	C	2.5		C	0.7		C	1.0
	E	3.2		E	0		E	0.3
Q517	B	4.1	Q602	B	4.2	Q909	B	0
	C	3.4		C	0.4		C	1.2
	E	0		E	0.5		E	0
Q518	B	0.7	Q901	B	0.8			
	C	1.3		C	0.7			
	E	0		E	0			

P BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC8801	1	1.3	IC8802	I	4.5
	2	1.7		G	0
	3	0.2		O	3.3
	4	0.2	Q8801	B	0.6
	5	4.5		C	0
	6	4.4		E	1.3
	7	3.3	Q8802	B	1.0
	8	0		C	0
	9	0		E	1.7
	10	0.8	Q8803	B	0.6
	11	0.5		C	0
	12	0.5		E	1.3
	13	0.5	Q8806	B	0.3
	14	0.7		C	3.3
	15	0		E	0.3
	16	0.3	Q8807	B	0.1
	17	0		C	3.3
	18	0.3		E	0.1
	19	0	Q8808	B	2.6
	20	0		C	0
	21	3.3		E	3.2
	22	3.3	Q8809	B	2.1
	23	0		C	0
	24	0.2		E	2.7
	25	0	Q8810	B	2.6
	26	0.3		C	0
	27	2.1		E	3.2
	28	2.1	Q8811	B	0.3
				C	0
				E	1.0

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VM BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q5400	B	1.5		C	0
	C	8.4		E	5.9
	E	0.9	Q5405	B	5.9
Q5401	B	1.6		C	0
	C	5.2		E	6.2
	E	1.0	Q5406	B	134
Q5402	B	7.2		C	67.7
	C	9.0		E	134
	E	6.6	Q5407	B	1.3
Q5403	B	6.6		C	67.8
	C	9.0		E	0.8
	E	6.2			
Q5404	B	5.2			

H1 BOARD VOLTAGE LIST

Ref	Pin No.	Voltage[v]
IC901	1	4.9
	2	4.8
	3	0
Q1901	B	0.1
	C	4.9
	E	0.1
Q1902	B	4.5
	C	2.6
	E	1.8

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V2 BOARD VOLTAGE LIST (KV-EX29M39/EX29M65 ONLY)

Ref	Pin No.	Voltage[V]	Ref	Pin No.	Voltage[V]	Ref	Pin No.	Voltage[V]
IC5801	1	0		27	2.4	IC5802	I	7.9
	2	0		28	-0		G	0
	3	0		29	0.9		O	4.9
	4	0		30	0	Q5801	B	4.8
	5	0		31	1.8		C	4.9
	6	0		32	0.2		E	4.2
	7	0		33	0.5	Q5803	B	0.7
	8	0		34	0.2		C	0.02
	9	0		35	4.8		E	0
	10	0		36	0.3	Q5806	B	0.03
	11	0		37	0.1		C	4.9
	12	0		38	4.9		E	0
	13	0		39	4.9	Q5807	B	0.04
	14	0		40	0		C	4.9
	15	0		41	2.3		E	0
	16	00		42	2.5	Q5808	B	0.04
	17	0		43	0		C	4.9
	18	0		44	4.8		E	0
	19	0		45	0	Q5810	B	0.3
	20	0.9		46	0		C	4.9
	21	0.9		47	4.9		E	0.3
	22	0		48	0	Q5817	B	4.9
	23	2.2		49	4.5		C	0.1
	24	0.9		50	4.5		E	0.09
	25	2.0		51	0			
	26	2.4		52	0			

DH BOARD VOLTAGE LIST (KV-EX34M97 ONLY)

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC3805	1	4.2	Q3807	B	0
	2	3.8		C	4.8
	3	2.6		E	0
	4	2.6	Q3808	B	4.8
	5	0		C	0.1
	6	2.6		E	0
	7	2.6	Q3809	B	0.1
	8	2.6		C	1.5
	9	2.4		E	2.6
	10	6.6	Q3810	B	2.5
IC3807	1	10.8		C	0
	2	0		E	3.2
	3	2.5	Q3811	B	3.2
	4	1.7		C	6.6
	5	0		E	2.5
	6	0	Q3812	B	0.1
	7	4.9		C	2.6
	8	0		E	1.5

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D BOARD VOLTAGE LIST (KV-EX29 MODELS)

Ref	Pin No.	Voltage[v]
IC6600	1	2.7
	2	1.9
	3	2.2
	4	2.5
	5	0
	6	0
	7	4.6
	8	17.8
	9	0.01
	10	10.4
	11	0
	12	4.8
	13	✻
	14	139
	15	129
	16	133
	17	✻
	18	294
IC6601	1	2.4
	2	0
	3	5.0
IC6607	1	134.0
	2	2.5
	3	8.8
	4	0
IC6608	1	0.04
	2	0.04
	3	18
	4	7.0
	5	4.2
	6	7.0
	7	4.1
	8	3.2
	9	5.0
	10	8.8
	11	5.0
	12	0
	13	0.11
	14	18
IC6800	1	1.1
	2	13.5
	3	-13.6
	4	-15
	5	0.4
	6	14.0
	7	1.1
IC6801	1	8.0
	2	1.5
	3	3.1
	4	0
	5	3.8
	6	6.6
	7	0.2
	8	9.0
IC6804	I	11.1
	G	0
	O	9.0
IC6805	I	14.0
	G	0
	O	11.9
IC6806	I	✻
	G	✻
	O	✻
	VC	✻
Q6100	D	302
	G	0.9
	S	0
Q6102	B	0.4
	C	1.0
	E	0
Q6600	D	297.0
	G	134.0
	S	130.0
Q6601	B	-0.02
	C	12.0
	E	0
Q6602	B	0.3
	C	18.0
	E	0
Q6603	D	131.0
	G	4.8
	S	0
Q6604	B	16.9
	C	17.6
	E	17.7
Q6605	B	0.8
	C	0.13
	E	0.12
Q6608	B	0.6
	C	0
	E	0
Q6609	B	4.9
	C	0
	E	5.0
Q6610	B	0.5
	C	4.9
	E	0.2
Q6611	B	0.4
	C	7.1
	E	0
Q6613	B	0
	C	0.6
	E	0
Q6614	B	17.6
	C	0
	E	17.7
Q6617	B	0
	C	7.0
	E	0
Q6618	B	7.0
	C	0
	E	7.0
Q6800	B	-0.5
	C	13.9
	E	0.9
Q6803	B	7.0
	C	0
	E	7.0
Q6804	B	8.0
	C	9.0
	E	8.0
Q6805	B	-0.3
	C	68.0
	E	0
Q6806	B	-0.3
	C	59.0
	E	0
Q6809	D	20.0
	G	2.7
	S	0
Q6810	D	135.8
	G	1.7
	S	0
Q6811	B	0
	C	9.0
	E	0
Q6812	B	-0.8
	C	81.0
	E	0
Q6813	B	0.4
	C	6.4
	E	0
Q6814	B	9.1
	C	3.0
	E	9.0
Q6815	B	134.5
	C	134.1
	E	135.0
Q6816	B	0.6
	C	0
	E	0
Q6817	B	0
	C	0.5
	E	0
Q6818	B	3.0
	C	0
	E	0
Q6819	B	-9.0
	C	-9.4
	E	-12.9
Q6820	B	0.2
	C	0.3
	E	0
Q6821	B	0
	C	-10.9
	E	0
Q6823	B	0
	C	8.9
	E	3.1

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D BOARD VOLTAGE LIST (KV-EX34 MODEL)

Ref	Pin No.	Voltage[v]
IC6600	1	2.8
	2	1.9
	3	2.2
	4	2.5
	5	0
	6	0
	7	4.6
	8	17.5
	9	0
	10	10.2
	11	0
	12	4.7
	13	*
	14	142.8
	15	133
	16	136.2
	17	*
	18	307
IC6601	1	2.4
	2	0
	3	5.0
IC6607	1	134.2
	2	2.5
	3	8.5
	4	0
IC6608	1	0
	2	0
	3	17.9
	4	2.0
	5	2.0
	6	2.0
	7	1.9
	8	3.2
	9	5.0
	10	8.9
	11	5.0
	12	0
	13	0.1
	14	17.9
IC6800	1	1.0
	2	14.2
	3	-14.3
	4	-16.0
	5	0.4
	6	14.6
	7	1.0
IC6801	1	7.2
	2	1.5
	3	2.6
	4	0
	5	3.4
	6	6.7
	7	0.2
	8	9.1
IC6804	I	10.8
	G	0
	O	9.1
IC6805	I	13.7
	G	0
	O	11.9
IC6806	I	8.4
	G	0
	O	6.3
	VC	2.2
Q6100	D	320
	G	1.0
	S	0
Q6102	B	0.4
	C	1.0
	E	0
Q6600	B	128
	C	297
	E	125
Q6601	B	0
	C	11.9
	E	0
Q6602	B	0.3
	C	18
	E	0
Q6603	B	4.8
	C	134
	E	0
Q6604	B	17.2
	C	17.9
	E	18.0
Q6605	B	0.8
	C	0.13
	E	0.12
Q6608	B	0.6
	C	0
	E	0
Q6609	B	4.9
	C	0
	E	5.0
Q6610	B	0.5
	C	4.9
	E	0.2
Q6611	B	0
	C	3.9
	E	0
Q6613	B	0
	C	0.6
	E	0
Q6614	B	18.0
	C	0
	E	18.0
Q6800	B	-0.5
	C	14.5
	E	0.9
Q6803	B	7.2
	C	0
	E	7.2
Q6804	B	7.2
	C	9.1
	E	0
Q6805	B	-0.4
	C	65.5
	E	0
Q6806	B	-0.3
	C	54.5
	E	0
Q6809	D	12.4
	G	3.4
	S	0
Q6810	D	104/SAJ35.8
	G	2.0
	S	0.1
Q6811	B	-0
	C	-11.4
	E	0
Q6813	B	0.4
	C	6.5
	E	0
Q6814	B	9.1
	C	3.0
	E	9.1
Q6815	B	134.5
	C	134.7
	E	135.2
Q6816	B	0.6
	C	0.1
	E	0
Q6817	B	0
	C	0.6
	E	0
Q6818	B	3.4
	C	0
	E	0
Q6819	B	-9.0
	C	-9.4
	E	-12.9
Q6820	B	2.4
	C	5.4
	E	0
Q6821	B	0
	C	-10.9
	E	0
Q6823	B	0
	C	8.9
	E	3.1

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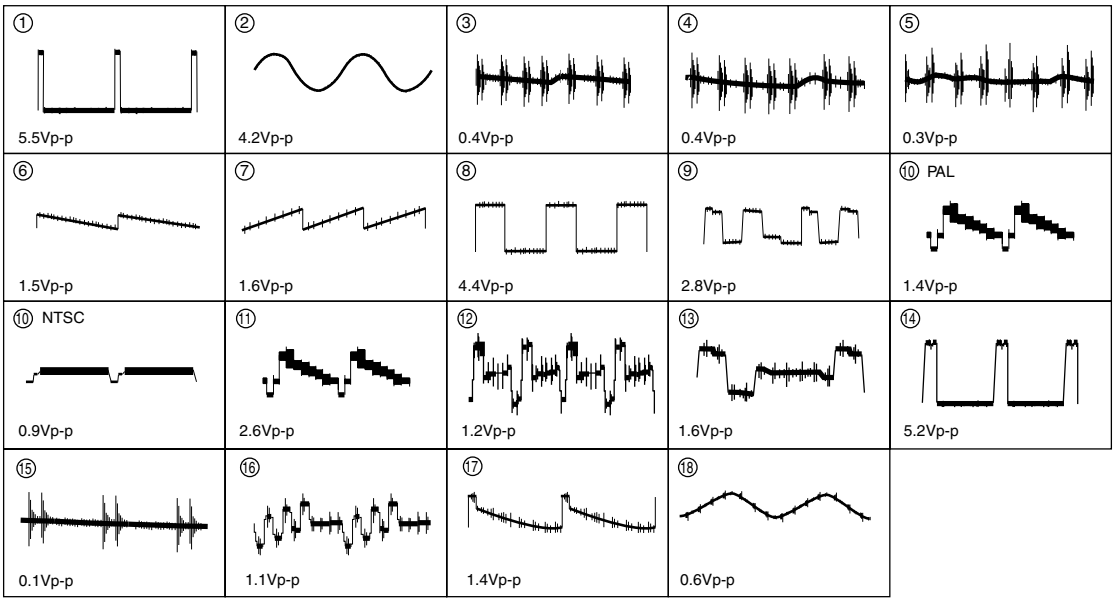
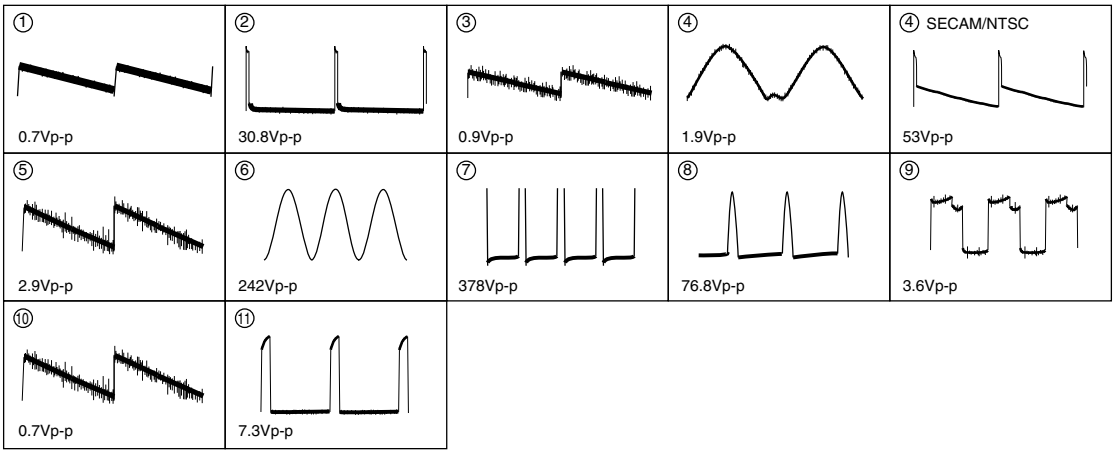
8-4. WAVEFORMS

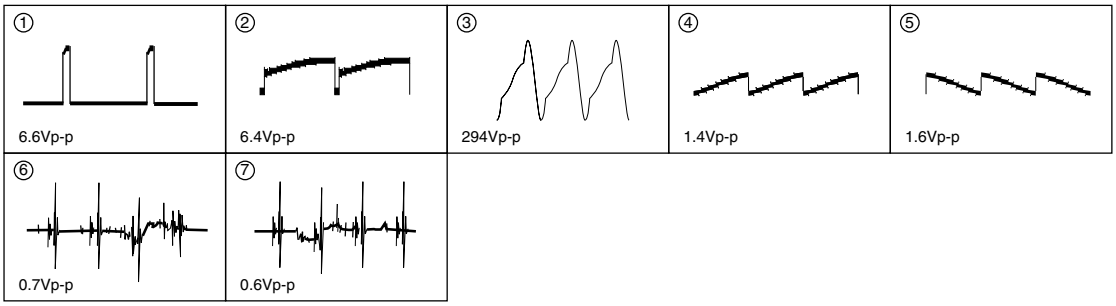
A BOARD WAVEFORMS



D BOARD WAVEFORMS



D1 BOARD WAVEFORMS



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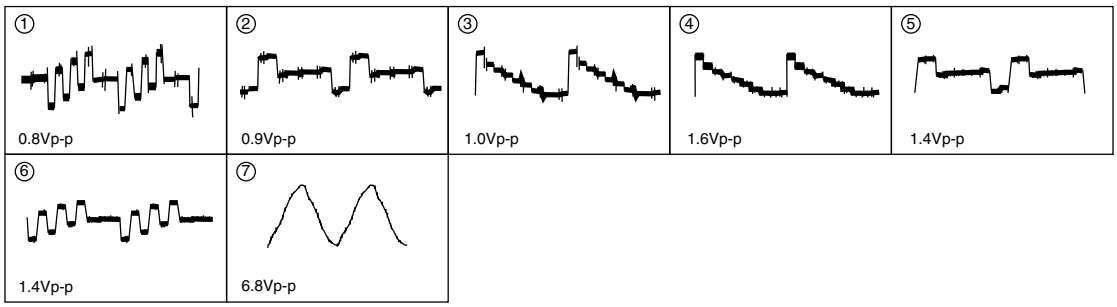
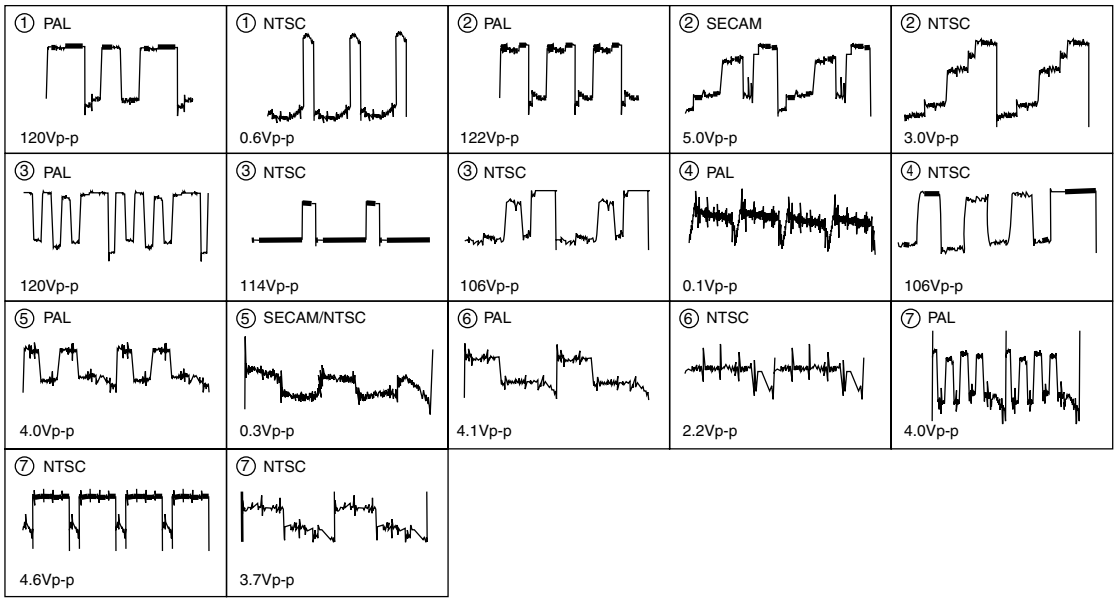
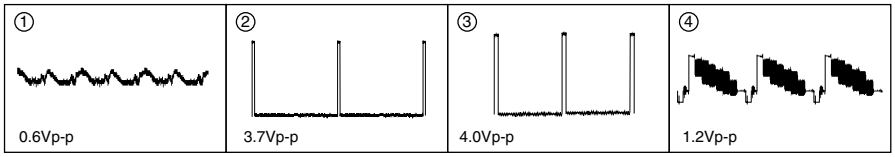
B3 BOARD WAVEFORMS



C BOARD WAVEFORMS



V2 BOARD WAVEFORMS



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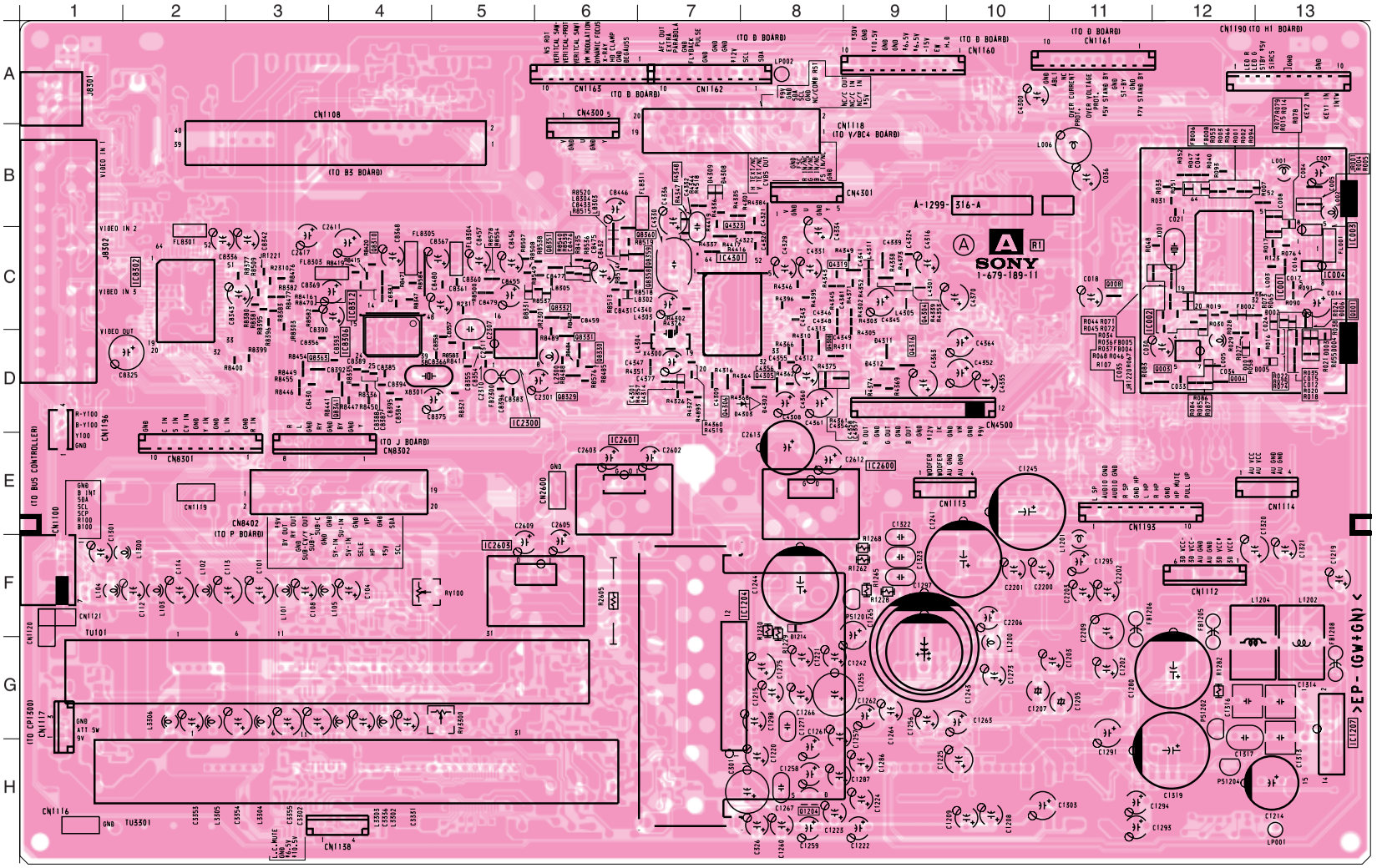
8-5. PRINTED WIRING BOARDS AND PARTS LOCATION

PRINTED WIRING BOARDS

A [MAIN MICON, TUVIF, AUDIO AMPLIFIER, RGB OUT, YCT, COMB FILTER, VIDEO/AUDIO IN/OUT]

– A Board – (Component Side)



A BOARD (Component Side)

IC	
IC001	C-13
IC002	C-11
IC003	C-13
IC004	C-13
IC1204	F-7
IC1207	G-13
IC2300	D-5
IC2600	E-9
IC2601	E-6
IC2603	F-5
IC4301	C-7
IC8302	C-2
IC8306	D-4
IC8312	C-4

TRANSISTOR	
Q001	C-13
Q003	D-12
Q004	D-12
Q008	C-11
Q1204	H-8
Q4304	C-9
Q4305	D-8
Q4306	D-7
Q4308	D-8
Q4316	D-9
Q4319	C-8
Q4323	B-7
Q8310	C-4
Q8329	D-6
Q8330	D-6
Q8331	D-6
Q8332	C-6
Q8351	C-6
Q8358	C-7
Q8359	C-7
Q8360	C-7
Q8361	D-4
Q8363	D-3

DIODE	
D001	D-12
D002	C-13
D003	D-13
D004	D-13
D005	D-12
D006	C-13
D1214	F-8
D4302	D-8
D4303	D-8
D4308	B-7
D4309	B-7
D4311	D-9
D4312	D-9
D4314	D-7
D8331	C-5

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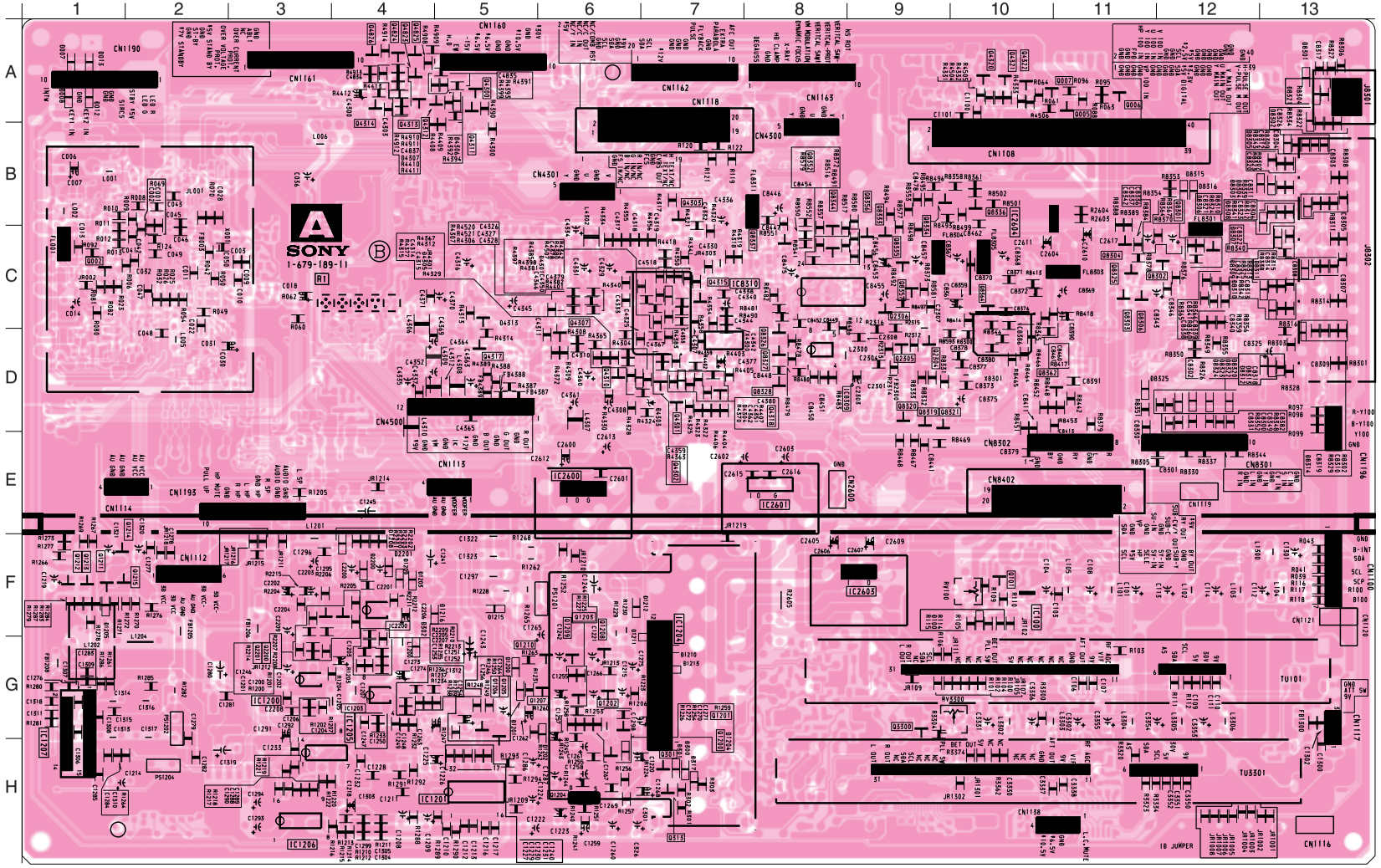
A [MAIN MICON, TUVIF, AUDIO AMPLIFIER, RGB OUT, YCT, COMB FILTER, VIDEO/AUDIO IN/OUT]

– A Board – (Conductor Side)



A BOARD (Conductor Side)

IC		TRANSISTOR		DIODE	
IC001	F-10	Q002	C-1	D007	A-1
IC1200	G-3	Q005	A-1	D008	A-1
IC1201	H-4	Q006	A-11	D012	A-1
IC1203	G-4	Q007	A-11	D013	A-1
IC1204	F-7	Q101	F-10	D100	F-9
IC1205	G-4	Q301	H-7	D300	H-7
IC1206	H-3	Q313	H-7	D301	H-7
IC1207	H-1	Q1200	G-7	D302	F-4
IC2200	F-4	Q1201	G-7	D317	H-7
IC2600	E-6	Q1202	G-6	D1200	G-5
IC2601	E-8	Q1203	F-6	D1201	G-5
IC2603	F-9	Q1204	H-6	D1202	H-6
IC2604	B-10	Q1205	G-5	D1203	F-4
IC8309	D-9	Q1206	G-5	D1204	G-7
IC8310	C-7	Q1207	G-5	D1205	F-1
		Q1208	F-6	D1208	F-4
		Q1209	F-6	D1209	F-4
		Q1210	G-5	D1210	G-7
		Q1211	F-1	D1211	F-6
		Q1212	F-1	D1212	F-6
		Q1213	F-1	D1213	G-7
		Q1214	E-2	D1215	F-5
		Q1215	F-2	D1216	F-5
		Q2200	G-3	D2200	F-4
		Q2201	G-3	D2201	F-4
		Q2304	D-9	D4303	D-7
		Q2305	D-9	D4304	D-7
		Q2306	C-9	D4305	C-4
		Q3300	G-9	D4306	B-5
		Q4300	A-5	D4307	B-4
		Q4301	D-7	D4313	C-5
		Q4302	E-7	D8301	A-13
		Q4303	B-7	D8302	A-13
		Q4307	C-6	D8303	B-12
		Q4310	D-6	D8304	B-12
		Q4311	B-5	D8305	B-12
		Q4312	B-4	D8306	B-12
		Q4313	B-4	D8307	C-12
		Q4314	B-4	D8308	B-12
		Q4315	C-7	D8309	C-12
		Q4317	D-5	D8310	C-12
		Q4318	D-8	D8311	C-12
		Q4320	A-10	D8312	D-12
		Q4321	A-10	D8313	D-12
		Q4322	A-10	D8314	E-13
		Q4823	A-4	D8315	B-12
		Q4824	A-4	D8316	B-12
		Q4825	A-4	D8320	D-12
		Q4826	A-4	D8321	A-13
		Q8301	B-12	D8322	D-12
		Q8302	C-12	D8323	D-12
		Q8303	C-11	D8324	D-12
		Q8304	C-11	D8325	D-12
		Q8306	C-11		
		Q8319	D-9		
		Q8320	D-9		
		Q8321	D-10		
		Q8325	C-11		
		Q8326	D-8		
		Q8327	D-8		
		Q8328	D-8		
		Q8333	B-9		
		Q8334	B-9		
		Q8335	C-9		
		Q8336	B-10		
		Q8337	C-8		
		Q8344	B-8		
		Q8352	B-8		
		Q8356	B-9		
		Q8357	C-9		
		Q8357	C-9		
		Q8362	D-10		
		Q8364	C-10		

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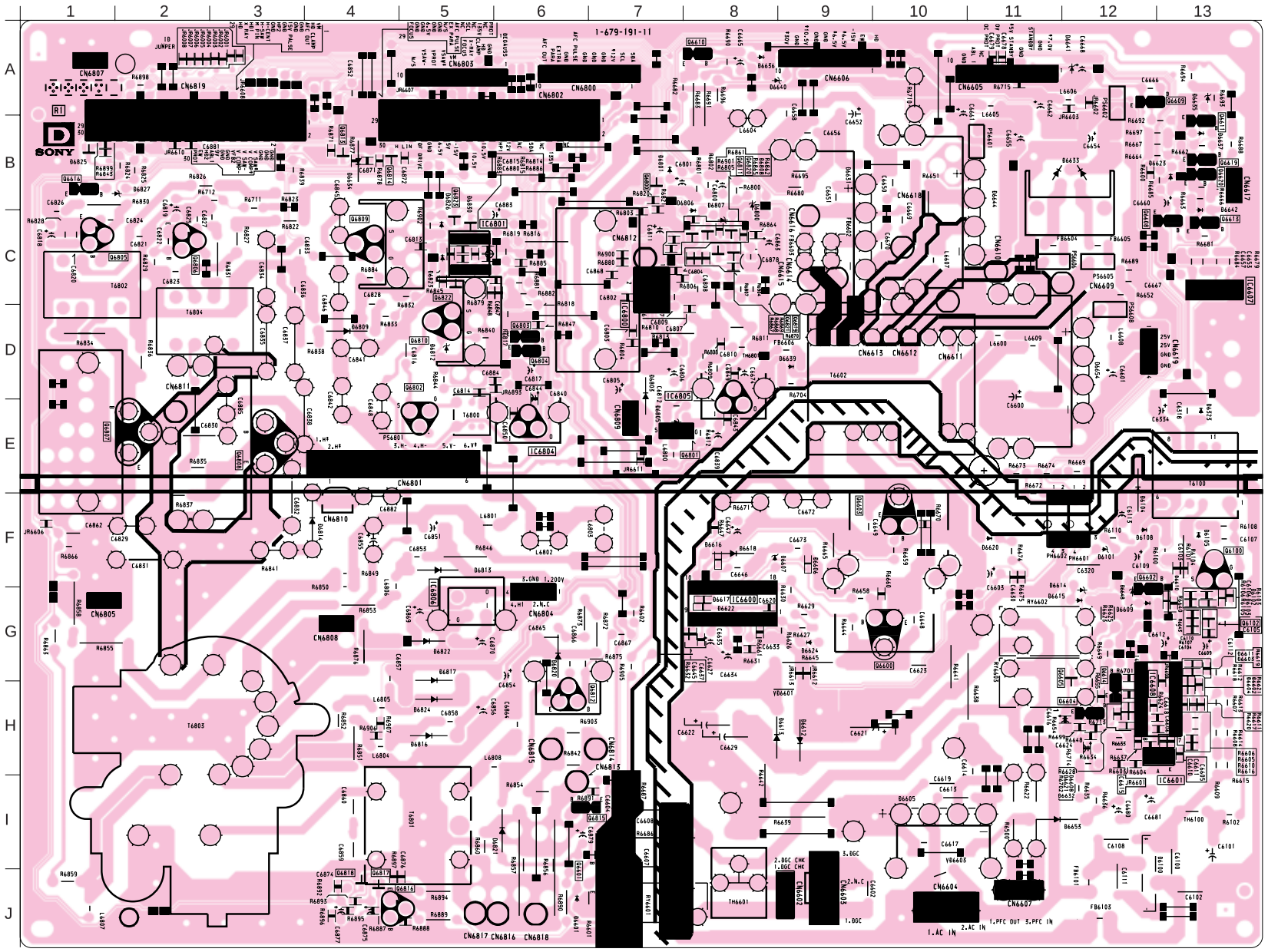
PRINTED WIRING BOARDS

D [POWER SUPPLY, DEFLECTION HV]

– D Board –



D BOARD

IC		TRANSISTOR		TRANSISTOR	
IC6600	G8	Q6100	F-13	D6100	I-13
IC6601	H13	Q6102	G-13	D6101	F-12
IC6607	C13	Q6600	G-10	D6102	G-13
IC6608	G12	Q6601	I-6	D6103	G-13
IC6800	D7	Q6602	F-12	D6104	F-12
IC6801	C5	Q6603	F-9	D6105	F-13
IC6804	E6	Q6604	H-12	D6108	F-12
IC6805	D7	Q6605	G12	D6323	E-13
IC6806	G5	Q6608	C-12	D6601	J-6
		Q6609	A-13	D6602	G-13
		Q6610	A-8	D6603	G-13
		Q6611	B-13	D6604	G-13
		Q6613	C-13	D6605	I-10
		Q6614	G-12	D6606	F-9
		Q6616	B-1	D6607	F-9
		Q6619	B-13	D6608	I-12
		Q6620	B-13	D6609	G-12
		Q6800	B-7	D6610	F-13
		Q6801	E-8	D6611	G-13
		Q6802	D-5	D6612	H-9
		Q6803	D-6	D6613	H-8
		Q6804	D-6	D6614	F-11
		Q6805	C-2	D6615	G-11
		Q6806	C-2	D6616	F-8
		Q6807	E-1	D6617	G-8
		Q6808	E-3	D6618	F-8
		Q6809	C-4	D6620	F-11
		Q6810	D-5	D6621	I-12
		Q6811	B-8	D6622	G-8
		Q6812	H-7	D6623	B-13
		Q6813	B-4	D6624	G-9
		Q6814	B-4	D6631	B-9
		Q6815	I-7	D6632	I-12
		Q6816	J-5	D6633	B-12
		Q6817	I-4	D6634	B-4
		Q6818	I-4	D6636	A-8
		Q6819	D-9	D6639	D-9
		Q6820	B-8	D6640	A-8
		Q6821	D-9	D6641	A-12
		Q6822	C-5	D6642	B-12
		Q6823	B-5	D6644	B-11
				D6648	G-12
				D6653	I-12
				D6654	D-12
				D6800	C-8
				D6801	B-7
				D6803	D-7
				D6805	E-7
				D6806	B-8
				D6807	B-8
				D6808	B-8
				D6809	D-4
				D6812	D-5
				D6813	F-5
				D6814	F-4
				D6816	H5
				D6817	G-5
				D6820	G-6
				D6821	I-5
				D6822	G-5
				D6823	C-5
				D6824	H-5
				D6825	B-1
				D6826	B-4
				D6827	B-2
				D6830	B-4

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PRINTED WIRING BOARDS

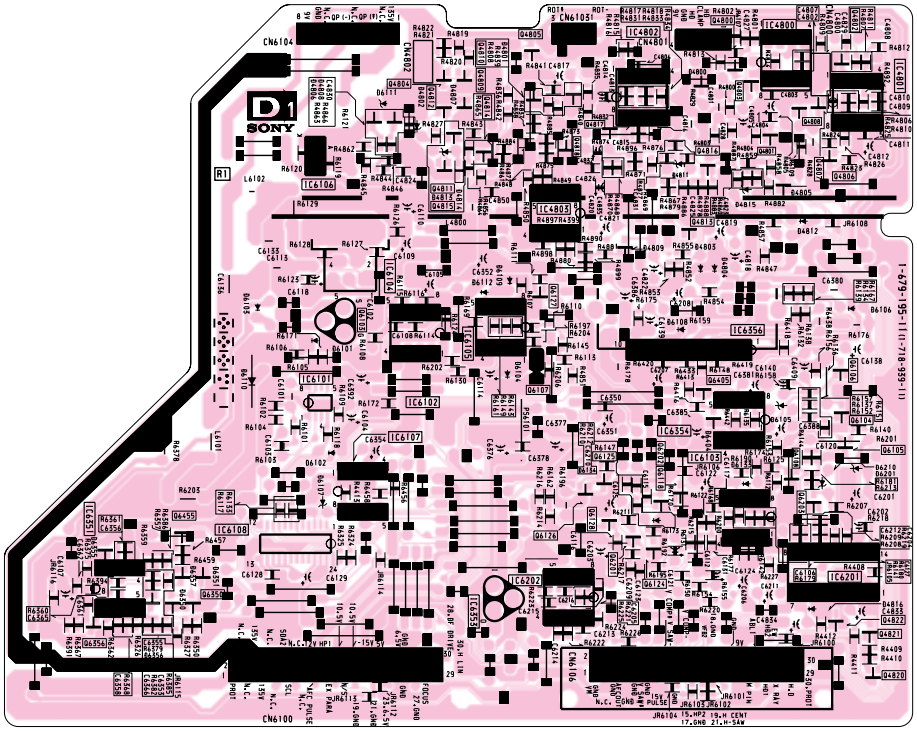
D1 [DYNAMIC FOCUS, DYNAMIC QUAD POLE DRIVE, HORIZONTAL DRIVE GENERATOR]

H1 [AC SW, AV INPUT, PRESET KEY, PHONE OUT,LED, SIRCS RECEIVER]

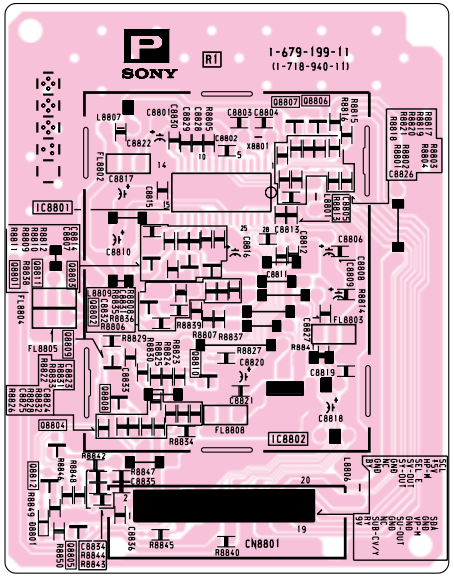
P [PICTURE IN PICTURE]

J [COMPONENT IN]

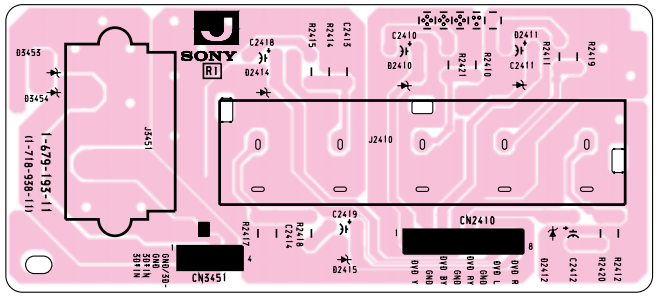
– D1 Board –



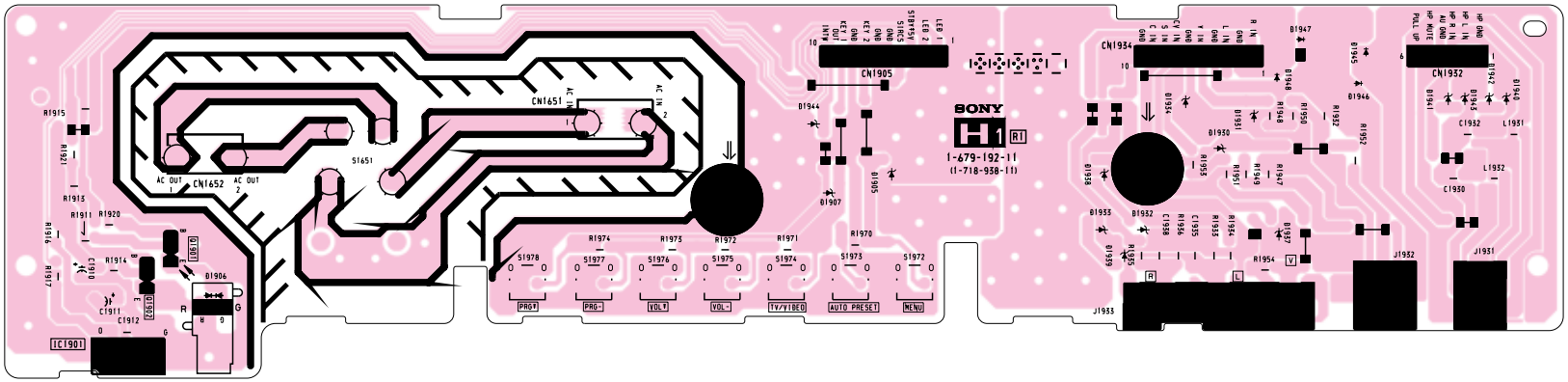
– P Board – (KV-EX29M39/EX29M87/EX29M97 ONLY)



– J Board –



– H1 Board –



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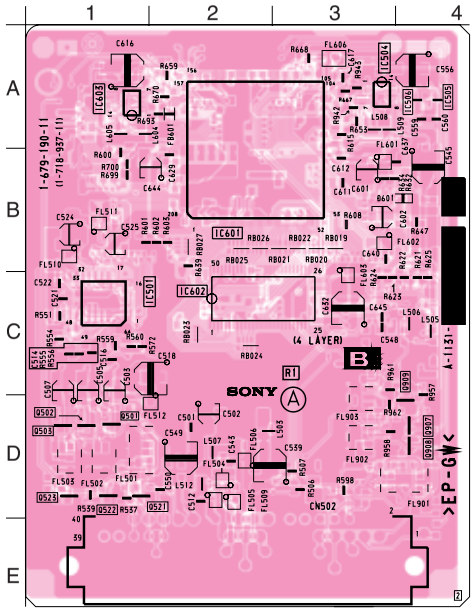
PRINTED WIRING BOARDS

B3 [DIGITAL REALITY CREATION] **DH** [MAGNETIC FIELD CORRECTION]

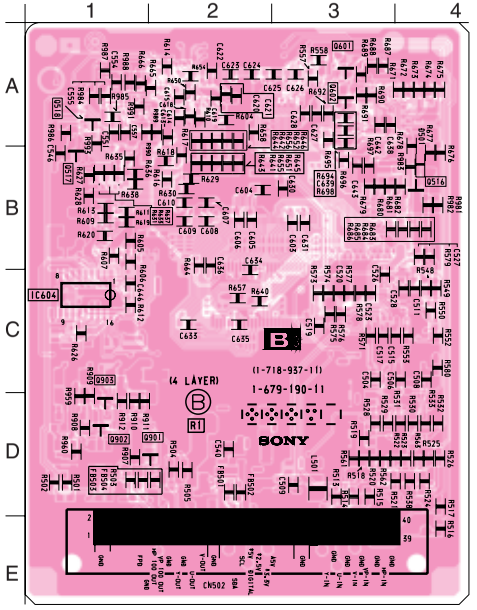
– B3 Board – (Component Side)



B3 BOARD (Component Side)

IC	
IC501	C-1
IC504	A-3
IC505	A-4
IC505	A-4
IC601	B-2
IC602	C-2
IC603	A-1
TRANSISTOR	
Q501	D-1
Q502	D-1
Q503	D-1
Q521	D-2
Q522	D-1
Q523	D-1
Q907	D-4
Q908	D-4
Q909	C-4
DIODE	
D601	B-3

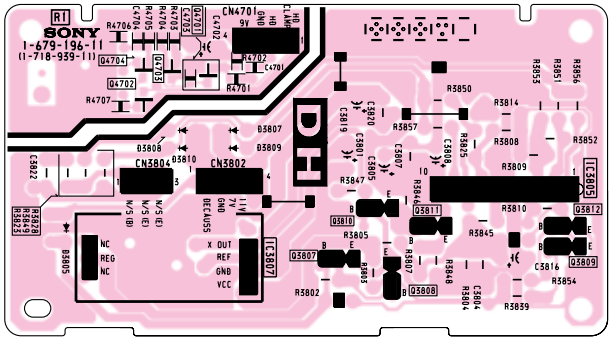
– B3 Board – (Conductor Side)



B3 BOARD (Conductor Side)

IC	
IC604	C-1
TRANSISTOR	
Q516	B-4
Q517	B-1
Q518	A-1
Q601	A-3
Q602	A-3
Q901	D-2
Q902	D-1
Q903	C-1
TRANSISTOR	
D501	A-4

– DH Board –



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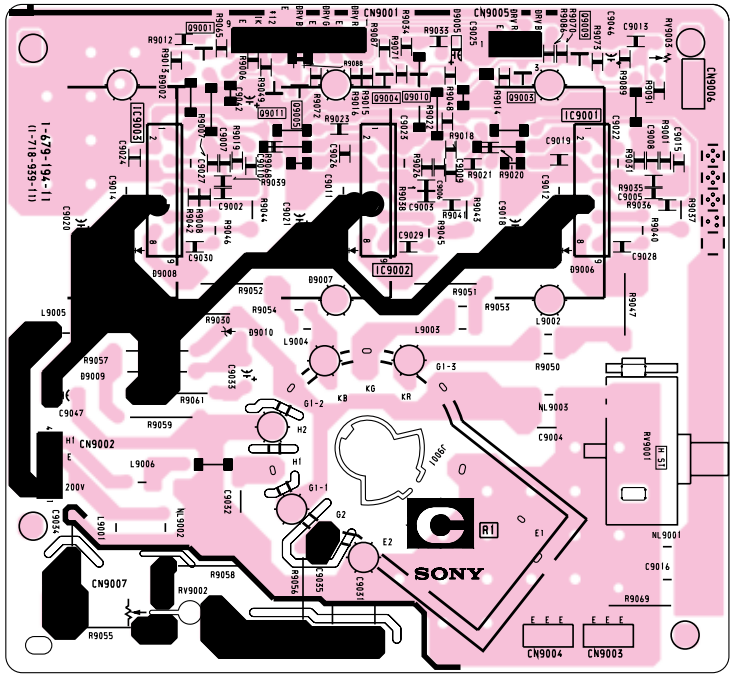
C [VIDEO AMPLIFIER]

F1 [AC LINE FILTER]

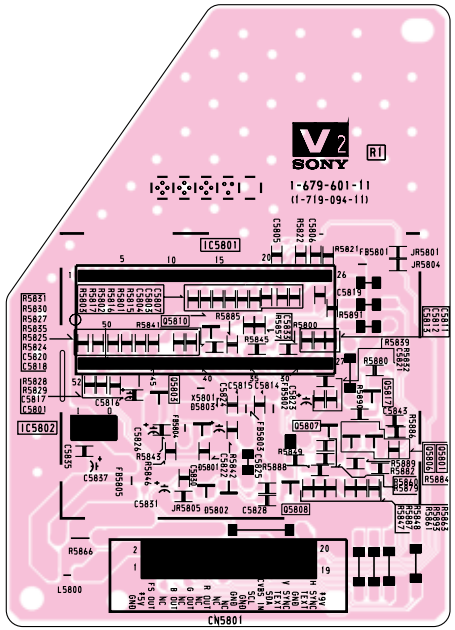
V2 [TELETEXT]

VM [VELOCITY MODULATION]

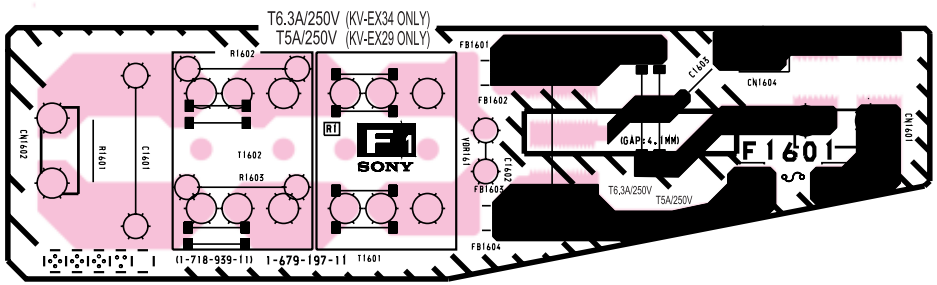
– C Board –



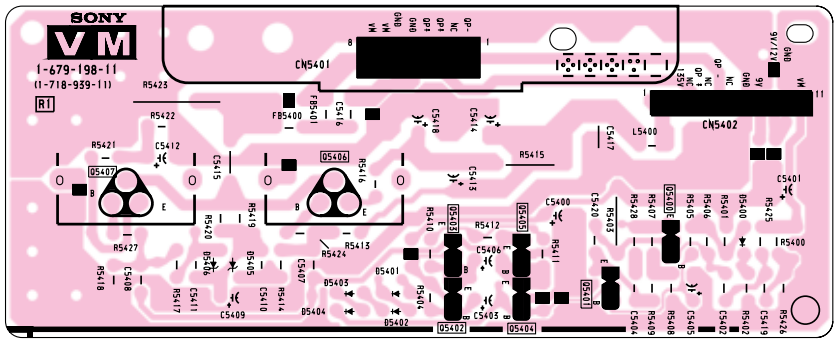
– V2 Board – (KV-EX29M39/EX29M65 ONLY)



– F1 Board –

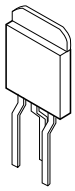
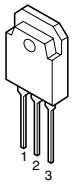
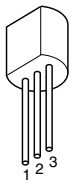
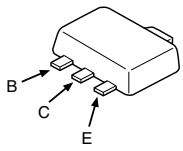
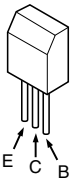
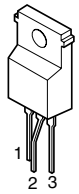


– VM Board –



8-6 SEMICONDUCTORS

TRANSISTOR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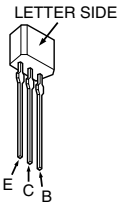	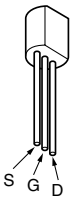	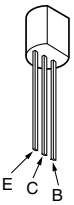	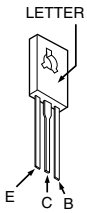	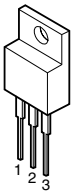	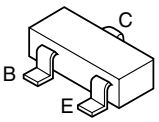
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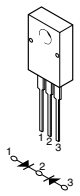
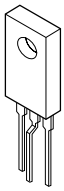
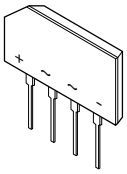
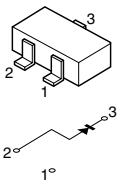
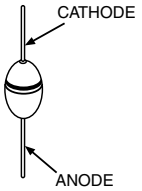
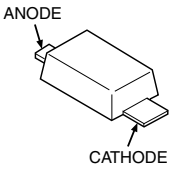
DIODE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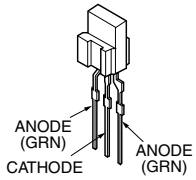	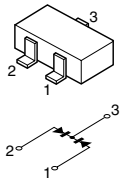	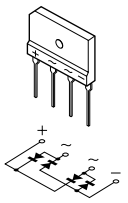	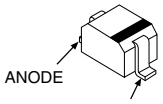	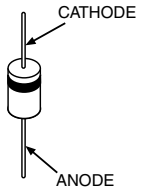	
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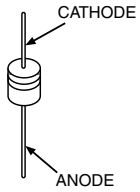
DIODE



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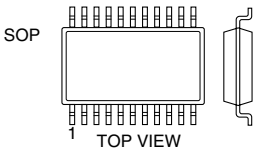
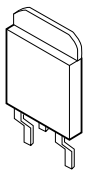
MTZJ-T-77-10	RD22ESB1	MTZJ-T-77-15
MTZJ-T-77-22	ERA85-009	RD18ES-B2
MTZJ-T-77-2.2B	MTZJ-2.7A	RD18ESB
RD5.1ESB2	MTZJ-T-77-12	RD3.6ES-B1
RD2.2ESB2	ERA38-06	RD6.8ES-B1
RD10ESB2	MTZJ-30A	RD7.5ES-B2
RD2.7ESB2	D1N20R	RD15ES-B1
RD4.7ESB2	RD6.8ESB2	RD3.9ES-B2

IC



Single In -line Package
Pin 8~98



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TLC2933IPWR	BH3868AFS-E2	
MB81F161622B-80FN	UPC4558G2	
TC7SET00FU(TE85R)	NJM4560M	
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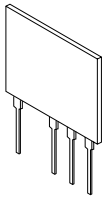
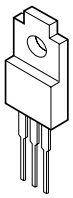


DM-58



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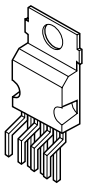

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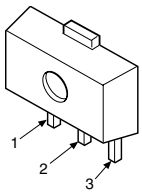

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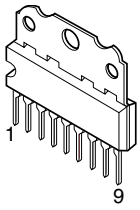

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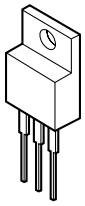

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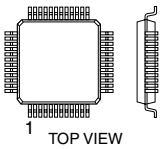

Quad Flat L-leaded
Package
Pin 20~996

CXD2090Q

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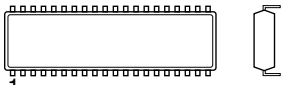

Dual In-line Package
Pin 6~98

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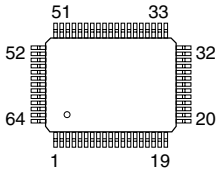

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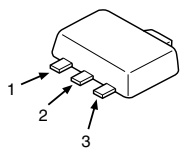
CXA2123AQ-T6	



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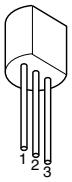

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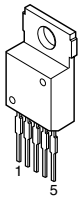

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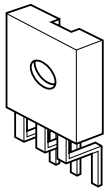

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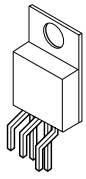

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SECTION 9
EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

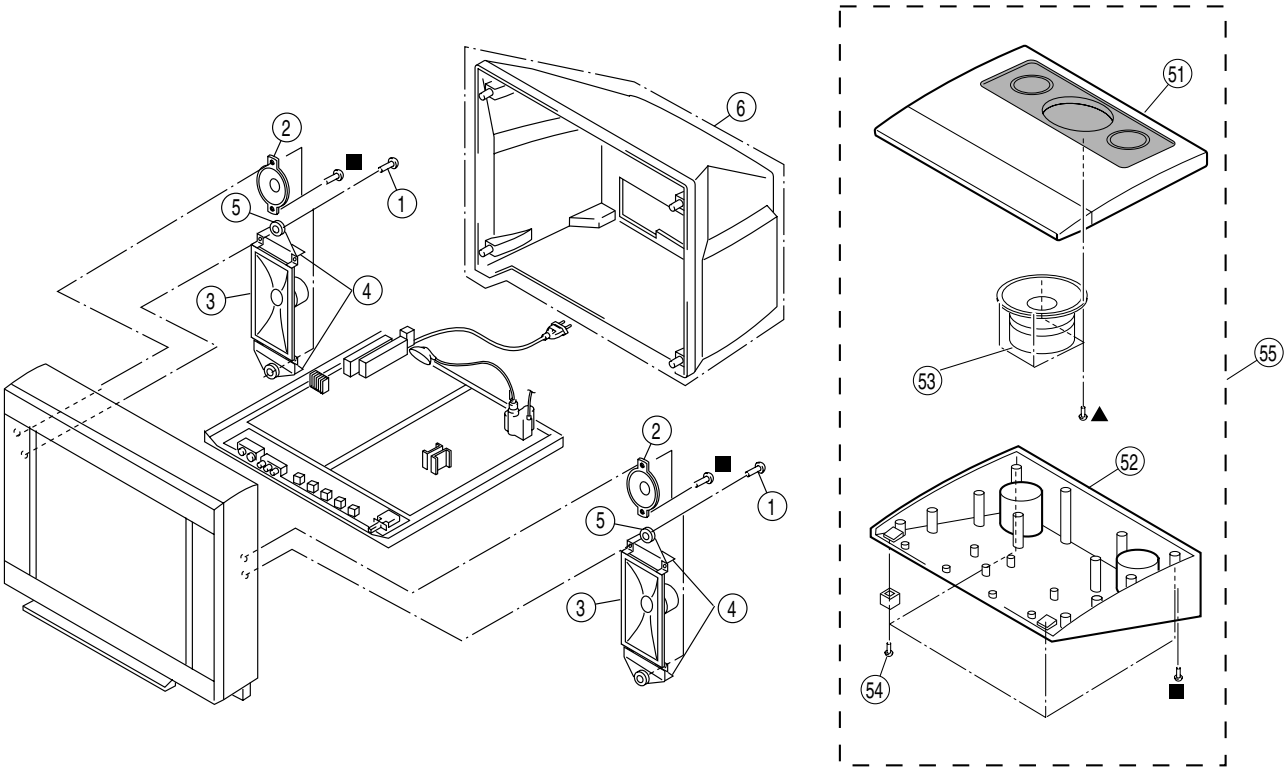
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

9-1. SPEAKER BRACKET

■ : 7-685-663-71 SCREW +BVTP 4 × 16

9-2. 3D SPEAKER

■ : 7-685-663-71 SCREW +BVTP 4 × 16
▲ : 7-685-661-14 SCREW +BVTP 4 × 12



REF. NO.		PART NO.	DESCRIPTION	REMARK
1		4-302-404-03	SCREW (WASHER HEAD)(+P4 x 16)	
2		1-529-190-11	SPEAKER (5CM)	
3		1-503-902-41	SPEAKER (15 x 6.5CM)	
4	*	4-046-981-01	BRACKET,SPEAKER	
5		4-374-745-21	CUSHION (A)	
6		X-4038-161-1	REAR COVER ASSY (■ 12 SCREWS) (EXCEPT KV-EX34M97)	
		X-4038-310-1	REAR COVER ASSY (■ 14 SCREWS) (KV-EX34M97)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
51	*	4-076-059-01	3D BOX, TOP	(■ 20 SCREWS)
52	*	4-076-060-01	3D BOX, BOTTOM	
53		1-529-839-11	SPEAKER, (16CM)	
54		4-302-428-03	SCREW (WASHER HEAD)(+P3 x 12)	
55		A-1501-737-A	3D BOX ASSY	

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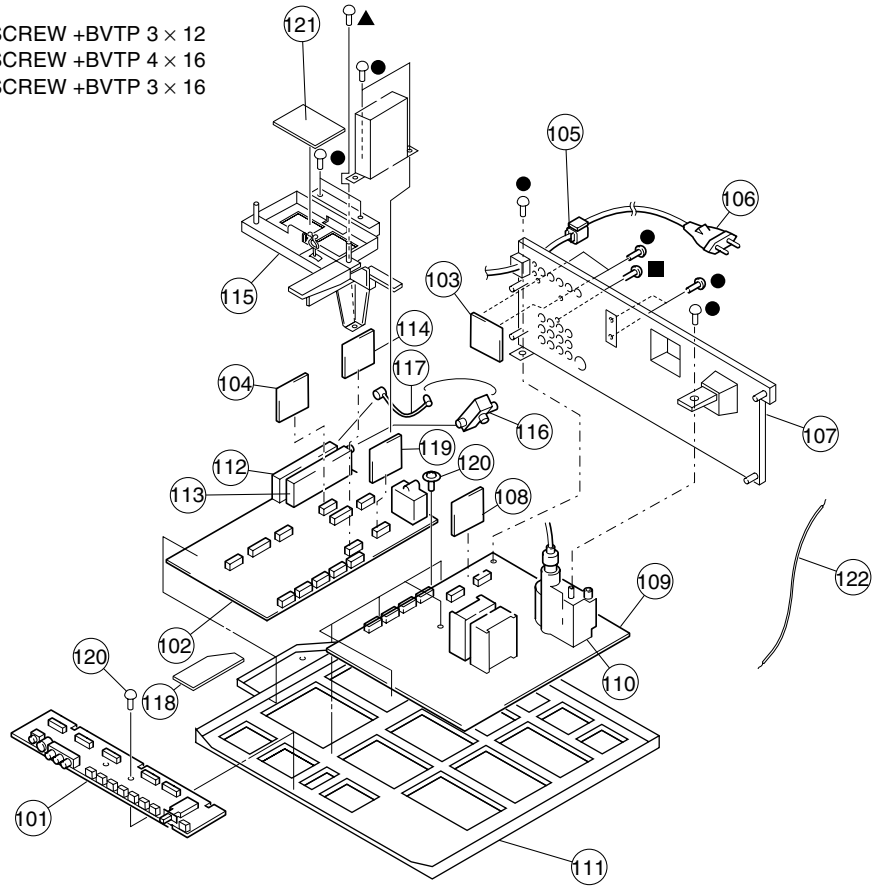
9-3. CHASSIS

● : 7-685-648-79 SCREW +BVTP 3 × 12
■ : 7-685-663-71 SCREW +BVTP 4 × 16
▲ : 7-685-650-79 SCREW +BVTP 3 × 16



REF. NO.		PART NO.	DESCRIPTION	REMARK
101	*	A-1372-869-A	H1 BOARD, MOUNTED	
102	*	A-1299-333-A	A BOARD, COMPLETE (KV-EX29M93)	
	*	A-1299-316-A	A BOARD, COMPLETE (KV-EX29M39)	
	*	A-1299-340-A	A BOARD, COMPLETE (KV-EX29M65)	
	*	A-1299-344-A	A BOARD, COMPLETE (KV-EX29M87)	
	*	A-1299-350-A	A BOARD, COMPLETE (KV-EX34M97)	
103	*	A-1388-286-A	J BOARD, MOUNTED	
104	*	A-1195-161-A	P BOARD, COMPLETE (Except KV-EX29M93/EX29M65)	
105	⚠	4-022-115-12	HOLDER, AC CORD	
106	⚠	1-574-062-52	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-EX29M65 ONLY)	
	⚠	1-574-062-22	CORD, POWER (WITH CONNECTOR) (KV-EX29M87 ONLY)	
	⚠	1-792-002-11	CORD, POWER (WITH FILTER) (KV-EX29M93/EX34M97)	
	⚠	1-792-035-11	CORD, POWER (WITH FILTER) (KV-EX29M39)	
107	*	4-075-447-01	BRACKET, TERMINAL (KV-EX29M39/EX29M87/EX34M97)	
	*	4-075-447-21	BRACKET, TERMINAL (KV-EX29M93/EX29M65)	
108	*	A-1343-928-A	D1 BOARD, MOUNTED (EXCEPT KV-EX34M97)	
	*	A-1343-962-A	D1 BOARD, MOUNTED (KV-EX34M97)	
109	*	A-1346-989-A	D BOARD, COMPLETE (EXCEPT KV-EX34M97/EX29M87)	
	*	A-1346-975-A	D BOARD, COMPLETE (KV-EX29M87 ONLY)	
	*	A-1346-995-A	D BOARD, COMPLETE (KV-EX34M97 ONLY)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
110	⚠	1-453-349-11	TRANSFORMER ASSY, FLYBACK (NX-4522//J1I4) (EXCEPT KV-EX34M97)	
	⚠	1-453-326-11	TRANSFORMER ASSY, FLYBACK (NX-4601//J1I4) (KV-EX34M97)	
111	*	4-075-446-01	BRACKET, MAIN	
112		8-598-508-10	TUNER, FSS BTF-LG436 (EXCEPT KV-EX29M65/EX29M93)	
113		8-598-452-20	TUNER, FSS BTF-WG442 (KV-EX29M39)	
		8-598-451-00	TUNER, FSS BTF-WG441 (KV-EX29M65)	
		8-598-450-10	TUNER, FSS BTF-LG434 (KV-EX29M87)	
		8-598-451-30	TUNER, FSS BTF-WG441 (KV-EX29M93)	
		8-598-452-30	TUNER, FSS BTF-WG442 (KV-EX34M97)	
114	*	A-1347-165-A	V2 BOARD, COMPLETE (KV-EX29M39/EX29M65)	
115	*	4-076-315-01	BRACKET, PWB	
116		1-251-658-21	SPLITTER RF (EXCEPT KV-EX29M93/EX29M65)	
117		1-555-110-00	P-P CABLE (EXCEPT KV-EX29M93/EX29M65)	
118	*	A-1241-437-A	F1 BOARD, MOUNTED (EXCEPT KV-EX34M97)	
		A-1241-448-A	F1 BOARD, MOUNTED (KV-EX34M97 ONLY)	
119	*	A-1136-132-A	B3 BOARD, COMPLETE	
120		4-046-797-01	SCREW (3 x 12)(+)BVTP	
121	*	A-1343-965-A	DH BOARD, MOUNTED (KV-EX34M97)	
	*	A-1333-004-A	DH BOARD, MOUNTED (EXCEPT KV-EX34M97)	
122		1-900-251-82	LEAD ASSY, G2 (KV-EX34M97 ONLY) (CN9007 (AT C BOARD) TO CN6810 (AT D BOARD))	

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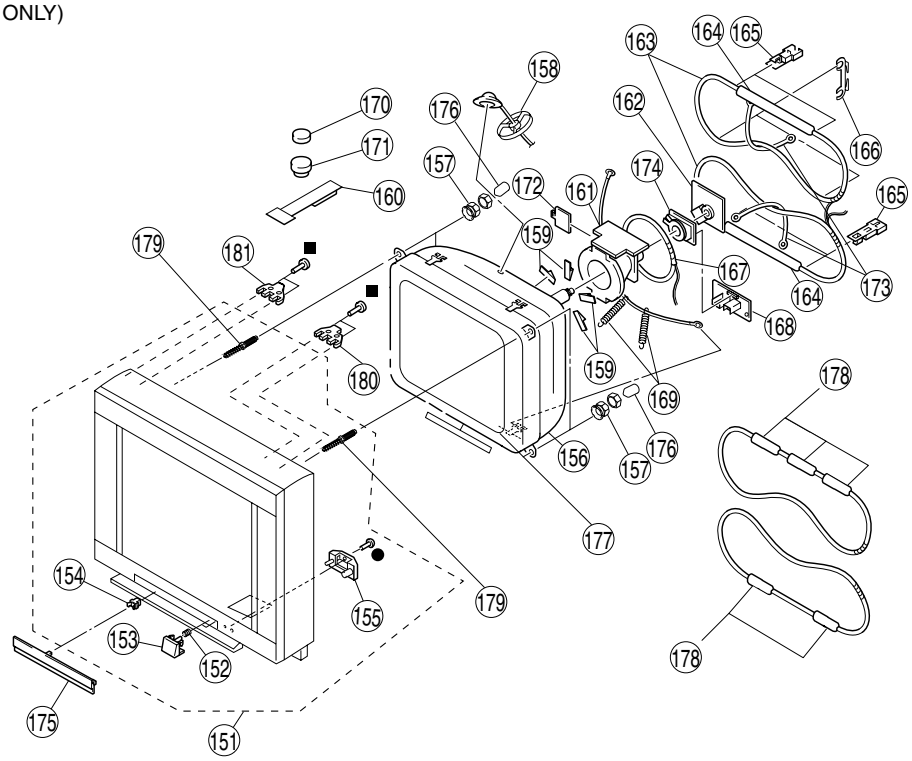
9-4. PICTURE TUBE

●: 7-685-648-79 SCREW +BVTP 3 × 12
■: 7-685-663-71 SCREW +BVTP 4 × 16

NOTE: The picture tube for OCE model is up-side down, and the position for the anode cap and springs are changed accordingly.
(KV-EX29M39 (OCE) ONLY)



REF. NO.		PART NO.	DESCRIPTION	REMARK
151		X-4038-241-1	BEZNET ASSY (KV-EX29M93)	152-155,175,179
		X-4038-160-1	BEZNET ASSY (KV-EX29M39)	152-155,175,179
		X-4038-248-1	BEZNET ASSY (KV-EX29M65)	152-155,175,179
		X-4038-296-1	BEZNET ASSY (KV-EX29M87)	152-155,175,179
		X-4038-311-1	BEZNET ASSY (KV-EX34M97)	152-155,175
152		4-036-405-11	SPRING, COMPRESSION	
153		4-075-747-01	BUTTON, POWER	
154		4-047-464-01	CATCHER, PUSH	
155	*	4-075-749-01	GUIDE, LIGHT	
156	⚠	8-735-056-05	PICTURE TUBE (M68LNH070X)	
			(KV-EX29M93/EX29M65/EX29M39)	
	⚠	8-735-057-05	PICTURE TUBE (M68LNH070X)	
			(KV-EX29M87)	
	⚠	8-735-062-05	PICTURE TUBE (A80LPD10X)	
			(KV-EX34M97)	
157		4-387-204-01	NUT SPECIAL, CRT	
158	*	3-704-372-11	HOLDER, HV CABLE	
159		3-703-961-01	SPACER DY	
160		X-4387-214-3	PERMALOY ASSY, CORRECTION	
161	⚠	8-451-504-61	DEFLECTION YOKE (Y29RSC-S2)	
			(EXCEPT KV-EX34M97)	
	⚠	8-451-500-31	DEFLECTION YOKE (Y34RSC-M3)	
			(KV-EX34M97)	
162	*	A-1332-101-A	C BOARD, MOUNTED (Except KV-EX34M97)	
	*	A-1332-123-A	C BOARD, MOUNTED (KV-EX34M97)	
163	⚠	1-419-323-21	COIL, DEGAUSSING	
			(Except KV-EX29M87/EX34M97)	
	⚠	1-419-294-11	COIL, DEGAUSSING (KV-EX29M87)	
	⚠	1-419-293-11	COIL, DEGAUSSING (KV-EX34M97)	
164	*	4-063-935-21	CUSHION (50 x 550), DGC	
			(EXCEPT KV-EX34M97)	

REF. NO.		PART NO.	DESCRIPTION	REMARK
165		4-062-970-12	CLIP (29RSN), DGC (Except KV-EX34M97)	
		4-069-493-02	CLIP, DGC (KV-EX34M97)	
166		4-064-883-03	HOLDER, DGC (Except KV-EX34M97)	
		4-061-369-01	HOLDER, DEGAUSE COIL (KV-EX34M97)	
167		1-452-896-11	COIL, NA ROTATION (RT200)	
168	*	A-1342-570-A	VM BOARD, MOUNTED	
169		4-369-318-61	SPRING, TENSION (Except KV-EX34M97)	
		4-078-766-01	SPRING, EXTENSION (KV-EX34M97)	
170		1-452-032-00	MAGNET, DISC	
171		1-452-094-00	CIRCULAR DISC MAGNET B	
172		4-077-228-01	PIECE, TLH CONVERGENCE	
173		4-068-028-32	BAND, DGC (Except KV-EX34M97)	
		4-067-455-01	BAND, DGC (KV-EX34M97)	
174		8-453-011-11	NA299-M (Except KV-EX34M97)	
		8-453-007-31	NA324-M3 (KV-EX34M97)	
175		4-075-748-11	CONTROL, DOOR (KV-EX29M93)	
		4-075-748-01	CONTROL, DOOR (KV-EX29M39)	
		4-075-748-21	CONTROL, DOOR (KV-EX29M65)	
		4-075-748-41	CONTROL, DOOR (KV-EX29M87)	
		4-075-748-71	CONTROL, DOOR (KV-EX34M97)	
176		4-074-060-01	CAP, SCREW	
177		1-416-871-11	COIL, LANDING CORRECTION (KV-EX34M97)	
178	*	4-074-512-21	CUSHION (S), DGC (KV-EX34M97)	
179		4-079-175-01	SCREW, CRT (TAPPING 7+M8)	
			(EXCEPT KV-EX34M97)	
180	*	X-4038-460-1	CRT (TOP, RIGHT) SUPPORT ASSY	
			(EXCEPT KV-EX34M97) (■ 2 SCREW)	
181	*	X-4038-461-1	CRT (TOP, LEFT) SUPPORT ASSY	
			(EXCEPT KV-EX34M97) (■ 2 SCREW)	

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SECTION 10
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF. NO.	PART NO.	DESCRIPTION			REMARK
	* A-1299-316-A	A BOARD COMPLETE (KV-EX29M39)			
	* A-1299-340-A	A BOARD COMPLETE (KV-EX29M65)			
	* A-1299-344-A	A BOARD COMPLETE (KV-EX29M87)			
	* A-1299-333-A	A BOARD COMPLETE (KV-EX29M93)			
	* A-1299-350-A	A BOARD COMPLETE (KV-EX34M97)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C001	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C002	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C004	1-163-001-11	CERAMIC CHIP	220PF	10.00% 50V	
C005	1-163-001-11	CERAMIC CHIP	220PF	10.00% 50V	
C006	1-107-725-11	CERAMIC CHIP	0.1UF	10.00% 16V	
C007	1-126-933-11	ELECT	100UF	20.00% 16V	
C009	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C010	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C012	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V	
C013	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C014	1-126-967-11	ELECT	47UF	20.00% 50V	
C015	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V	
C016	1-163-243-11	CERAMIC CHIP	47PF	5.00% 50V	
C017	1-163-113-00	CERAMIC CHIP	68PF	5.00% 50V	
C021	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C024	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V	
C028	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V	
C030	1-104-664-11	ELECT	47UF	20.00% 25V	
C031	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V	
C032	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C033	1-115-339-11	CERAMIC CHIP	0.1UF	10.00% 50V	
C034	1-163-259-91	CERAMIC CHIP	220PF	5.00% 50V	
C035	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C036	1-104-665-11	ELECT	100UF	20.00% 25V	
C041	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C042	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C043	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C044	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C045	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C046	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C047	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C048	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C050	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C103	1-107-725-11	CERAMIC CHIP	0.1UF	10.00% 16V	
C104	1-126-933-11	ELECT	100UF	20.00% 16V	
C107	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V	

REF. NO.	PART NO.	DESCRIPTION			REMARK
C108	1-126-933-11	ELECT	100UF	20.00% 16V	
C109	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V	
C110	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V	
C111	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V	
C112	1-126-933-11	ELECT	100UF	20.00% 16V	
C113	1-126-967-11	ELECT	47UF	20.00% 50V	
C114	1-126-967-11	ELECT	47UF	20.00% 50V	
C301	1-126-767-11	ELECT	1000UF	20.00% 16V	
C326	1-126-964-11	ELECT	10UF	20.00% 50V	
C1100	1-163-239-11	CERAMIC CHIP	33PF	5.00% 50V	
C1101	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C1102	1-102-116-00	CERAMIC CHIP	680PF	10.00% 50V	
		(EXCEPT KV-EX34M97)			
C1200	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C1201	1-216-295-11	SHORT	0		
C1202	1-104-664-11	ELECT	47UF	20.00% 16V	
C1203	1-104-664-11	ELECT	47UF	20.00% 16V	
C1204	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C1205	1-107-698-11	ELECT	10UF	20.00% 25V	
C1206	1-216-295-11	SHORT	0		
C1207	1-107-698-11	ELECT	10UF	20.00% 25V	
C1208	1-126-960-11	ELECT	1UF	20.00% 50V	
C1209	1-126-960-11	ELECT	1UF	20.00% 50V	
C1210	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V	
C1211	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C1212	1-115-185-11	CERAMIC CHIP	0.033UF	10.00% 50V	
C1213	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00% 50V	
C1215	1-126-960-11	ELECT	1UF	20.00% 50V	
C1216	1-164-344-11	CERAMIC CHIP	0.068UF	10.00% 25V	
C1217	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C1218	1-164-489-11	CERAMIC CHIP	0.22UF	10.00% 16V	
C1220	1-126-960-11	ELECT	1UF	20.00% 50V	
C1222	1-126-963-11	ELECT	4.7UF	20.00% 50V	
C1223	1-126-963-11	ELECT	4.7UF	20.00% 50V	
C1224	1-126-965-11	ELECT	22UF	20.00% 50V	
C1225	1-104-665-11	ELECT	100UF	20.00% 25V	
C1226	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C1227	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C1228	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C1229	1-115-185-11	CERAMIC CHIP	0.033UF	10.00% 50V	
C1230	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00% 50V	
C1231	1-164-344-11	CERAMIC CHIP	0.068UF	10.00% 25V	
C1232	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C1233	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C1240	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C1241	1-128-550-11	ELECT	2200UF	20.00% 50V	

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C1243	1-131-612-11	ELECT	6800UF	20%	50V
C1244	1-128-550-11	ELECT	2200UF	20.00%	50V
C1245	1-128-550-11	ELECT	2200UF	20.00%	50V
C1247	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1248	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1249	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1250	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1251	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1252	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C1253	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1254	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C1255	1-126-941-11	ELECT	470UF	20.00%	25V
C1256	1-126-964-11	ELECT	10UF	20.00%	50V
C1257	1-126-933-11	ELECT	100UF	20.00%	16V
C1258	1-126-960-11	ELECT	1UF	20.00%	50V
C1259	1-126-964-11	ELECT	10UF	20.00%	50V
C1261	1-126-960-11	ELECT	1UF	20.00%	50V
C1262	1-126-960-11	ELECT	1UF	20.00%	50V
C1263	1-126-965-11	ELECT	22UF	20.00%	50V
C1264	1-126-965-11	ELECT	22UF	20.00%	50V
C1265	1-249-429-11	CARBON	10K	5%	1/4W
C1266	1-126-964-11	ELECT	10UF	20.00%	50V
C1267	1-136-161-00	FILM	0.047UF	5.00%	50V
C1268	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1270	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1271	1-136-161-00	FILM	0.047UF	5.00%	50V
C1273	1-126-964-11	ELECT	10UF	20.00%	50V
C1274	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1275	1-126-948-11	ELECT	100UF	20.00%	35V
C1286	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1287	1-126-963-11	ELECT	4.7UF	20.00%	50V
C1288	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C1289	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1290	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C1291	1-104-665-11	ELECT	100UF	20.00%	25V
C1292	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1293	1-126-964-11	ELECT	10UF	20.00%	50V
C1294	1-126-964-11	ELECT	10UF	20.00%	50V
C1295	1-126-964-11	ELECT	10UF	20.00%	50V
C1296	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1297	1-136-161-00	FILM	0.047UF	5.00%	50V
C1298	1-126-960-11	ELECT	1UF	20.00%	50V
C1299	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1301	1-126-933-11	ELECT	100UF	20.00%	16V
C1302	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C1303	1-104-665-11	ELECT	100UF	20.00%	25V
C1304	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C1305	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C1312	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C1322	1-136-161-00	FILM	0.047UF	5.00%	50V
C1323	1-136-165-00	FILM	0.1UF	5.00%	50V
C2200	1-126-964-11	ELECT	10UF	20.00%	50V
C2201	1-126-964-11	ELECT	10UF	20.00%	50V
C2202	1-126-964-11	ELECT	10UF	20.00%	50V
C2203	1-126-963-11	ELECT	4.7UF	20.00%	50V
C2204	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2205	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2206	1-126-964-11	ELECT	10UF	20.00%	50V
C2207	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2208	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C2209	1-126-968-11	ELECT	100UF	20.00%	50V
C2301	1-126-965-11	ELECT	22UF	20.00%	50V
C2303	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2304	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2307	1-136-165-00	FILM	0.1UF	5.00%	50V
C2308	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C2600	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2601	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2602	1-126-933-11	ELECT	100UF	20.00%	16V
C2603	1-126-933-11	ELECT	100UF	20.00%	16V
C2605	1-104-665-11	ELECT	100UF	20.00%	10V
C2606	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2607	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2609	1-104-665-11	ELECT	100UF	20.00%	10V
C2610	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2611	1-126-924-11	ELECT	330UF	20.00%	10V
C2612	1-104-665-11	ELECT	100UF	20.00%	25V
C2613	1-126-936-11	ELECT	3300UF	20.00%	16V
C2615	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2616	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C2617	1-104-665-11	ELECT	100UF	20.00%	10V
C3330	1-107-725-11	CERAMIC CHIP	0.1UF	10.00%	16V
		(Except KV-EX29M65/EX29M93)			
C3331	1-126-933-11	ELECT	100UF	20.00%	16V
		(Except KV-EX29M65/EX29M93)			
C3336	1-126-933-11	ELECT	100UF	20.00%	16V
		(Except KV-EX29M65/EX29M93)			
C3338	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
		(Except KV-EX29M65/EX29M93)			
C3350	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
		(Except KV-EX29M65/EX29M93)			
C3351	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
		(Except KV-EX29M65/EX29M93)			
C3352	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
		(Except KV-EX29M65/EX29M93)			
C3353	1-126-933-11	ELECT	100UF	20.00%	16V
		(Except KV-EX29M65/EX29M93)			
C3354	1-126-967-11	ELECT	47UF	20.00%	50V
		(Except KV-EX29M65/EX29M93)			
C3355	1-126-967-11	ELECT	47UF	20.00%	50V
		(Except KV-EX29M65/EX29M93)			
C4300	1-126-964-11	ELECT	10UF	20.00%	50V
C4301	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4303	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
		(Except KV-EX34M97)			
C4303	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
		(KV-EX34M97)			
C4307	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4308	1-126-960-11	ELECT	1UF	20.00%	50V
C4309	1-164-489-11	CERAMIC CHIP	0.22UF	10.00%	16V
C4316	1-104-664-11	ELECT	47UF	20.00%	25V
C4317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4318	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4319	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4320	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4321	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4322	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4324	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C4325	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C4326	1-164-346-11	CERAMIC CHIP	1UF		16V
C4327	1-164-346-11	CERAMIC CHIP	1UF		16V
C4328	1-164-346-11	CERAMIC CHIP	1UF		16V
C4329	1-126-963-11	ELECT	4.7UF	20.00%	50V
C4330	1-136-244-11	FILM	0.1UF	5.00%	50V
C4331	1-126-959-11	ELECT	0.47UF	20.00%	50V
C4332	1-136-161-00	FILM	0.047UF	5.00%	50V
C4333	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4334	1-126-967-11	ELECT	47UF	20.00%	50V
C4336	1-126-967-11	ELECT	47UF	20.00%	50V
C4338	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4339	1-163-235-11	CERAMIC CHIP	22PF	5.00%	50V
C4340	1-126-933-11	ELECT	100UF	20.00%	16V
C4341	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C4342	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C4343	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4344	1-163-809-11	CERAMIC CHIP	0.047UF	10.00%	25V
C4345	1-126-967-11	ELECT	47UF	20.00%	50V
C4346	1-164-346-11	CERAMIC CHIP	1UF		16V
C4348	1-164-346-11	CERAMIC CHIP	1UF		16V
C4349	1-164-346-11	CERAMIC CHIP	1UF		16V
C4350	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4351	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C4352	1-126-967-11	ELECT	47UF	20.00%	50V
C4353	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4354	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C4355	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4356	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4357	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4358	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4359	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C4360	1-126-963-11	ELECT	4.7UF	20.00%	50V
C4362	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4363	1-126-967-11	ELECT	47UF	20.00%	50V
C4364	1-126-967-11	ELECT	47UF	20.00%	50V
C4366	1-163-021-91	CERAMIC CHIP (EXCEPT KV-EX34M97)	0.01UF	10.00%	50V
C4366	1-104-760-11	CERAMIC CHIP (KV-EX34M97)	0.047UF	10.00%	50V
C4367	1-115-185-11	CERAMIC CHIP (EXCEPT KV-EX34M97)	0.033UF	10.00%	50V
C4367	1-164-004-11	CERAMIC CHIP (KV-EX34M97)	0.1UF	10.00%	25V
C4369	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4370	1-126-967-11	ELECT	47UF	20.00%	50V
C4371	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C4378	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C4380	1-163-037-11	CERAMIC CHIP (EXCEPT KV-EX34M97)	0.022UF	10.00%	50V
C4835	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8300	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8301	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8302	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8303	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8304	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8305	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8306	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C8307	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8308	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8309	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8310	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C8311	1-164-346-11	CERAMIC CHIP	1UF		16V
C8312	1-164-346-11	CERAMIC CHIP	1UF		16V
C8313	1-164-346-11	CERAMIC CHIP	1UF		16V
C8314	1-164-346-11	CERAMIC CHIP	1UF		16V
C8317	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8318	1-164-346-11	CERAMIC CHIP	1UF		16V
C8319	1-164-346-11	CERAMIC CHIP	1UF		16V
C8320	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8321	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8322	1-164-346-11	CERAMIC CHIP	1UF		16V
C8323	1-164-346-11	CERAMIC CHIP	1UF		16V
C8324	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8325	1-126-935-11	ELECT	470UF	20.00%	16V
C8326	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8330	1-164-346-11	CERAMIC CHIP	1UF		16V
C8331	1-164-346-11	CERAMIC CHIP	1UF		16V
C8336	1-104-664-11	ELECT	47UF	20.00%	16V
C8337	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8338	1-164-346-11	CERAMIC CHIP	1UF		16V
C8339	1-164-346-11	CERAMIC CHIP	1UF		16V
C8340	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8341	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8342	1-126-964-11	ELECT	10UF	20.00%	50V
C8343	1-104-664-11	ELECT	47UF	20.00%	16V
C8346	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8349	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8354	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C8355	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8356	1-164-346-11	CERAMIC CHIP	1UF		16V
C8357	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8358	1-164-346-11	CERAMIC CHIP	1UF		16V
C8359	1-163-037-11	CERAMIC CHIP	0.022UF	10.00%	50V
C8361	1-126-961-11	ELECT	2.2UF	20.00%	50V
C8366	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8367	1-104-664-11	ELECT	47UF	20.00%	16V
C8368	1-104-664-11	ELECT	47UF	20.00%	16V
C8369	1-104-664-11	ELECT	47UF	20.00%	16V
C8370	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8371	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8372	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8373	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C8375	1-126-964-11	ELECT	10UF	20.00%	50V
C8376	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8377	1-164-346-11	CERAMIC CHIP	1UF		16V
C8378	1-164-346-11	CERAMIC CHIP	1UF		16V
C8379	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C8380	1-164-346-11	CERAMIC CHIP	1UF		16V
C8381	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C8382	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8383	1-164-346-11	CERAMIC CHIP	1UF		16V
C8384	1-164-346-11	CERAMIC CHIP	1UF		16V
C8385	1-164-346-11	CERAMIC CHIP	1UF		16V
C8386	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C8390	1-126-963-11	ELECT	4.7UF	20.00%	50V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C8391	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8392	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8393	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8411	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C8413	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C8430	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C8431	1-163-243-11	CERAMIC CHIP	47PF	5.00% 50V	
C8432	1-163-239-11	CERAMIC CHIP	33PF	5.00% 50V	
C8441	1-164-346-11	CERAMIC CHIP	1UF	16V	
C8446	1-104-664-11	ELECT	47UF	20.00% 16V	
C8447	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8448	1-164-690-91	CERAMIC CHIP	0.0022UF	5.00% 50V	
C8450	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V	
C8451	1-164-505-11	CERAMIC CHIP	2.2UF	16V	
C8452	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8453	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8454	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8455	1-104-664-11	ELECT	47UF	20.00% 16V	
C8456	1-104-664-11	ELECT	47UF	20.00% 16V	
C8457	1-104-664-11	ELECT	47UF	20.00% 16V	
C8459	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8462	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
		<CONNECTOR>			
CN1100*	1-785-608-11	PIN, CONNECTOR 4P			
CN1108	1-793-494-11	CONNECTOR, BOARD TO BOARD 40P			
CN1113*	1-564-507-11	PLUG, CONNECTOR 4P			
CN1114*	1-564-507-11	PLUG, CONNECTOR 4P			
CN1116	1-695-915-11	TAB (CONTACT)			
CN1118	1-793-493-11	CONNECTOR, BOARD TO BOARD 20P (KV-EX29M39/EX29M65)			
CN1120	1-695-915-11	TAB (CONTACT) (KV-EX34M97)			
CN1121	1-695-915-11	TAB (CONTACT) (KV-EX34M97)			
CN1138*	1-564-507-11	PLUG, CONNECTOR 4P (KV-EX34M97)			
CN1190*	1-764-333-11	PLUG, CONNECTOR 10P			
CN1193*	1-764-333-11	PLUG, CONNECTOR 10P			
CN2600	1-695-915-11	TAB (CONTACT)			
CN4500*	1-764-333-11	PLUG, CONNECTOR 10P			
CN8301*	1-764-333-11	PLUG, CONNECTOR 10P			
CN8302*	1-564-511-11	PLUG, CONNECTOR 8P			
CN8402	1-793-493-11	CONNECTOR, BOARD TO BOARD 20P (Except KV-EX29M65/EX29M93)			
		<DIODE>			
D001	8-719-073-01	DIODE MA111-(K8).S0			
D002	8-719-073-01	DIODE MA111-(K8).S0			
D003	8-719-073-01	DIODE MA111-(K8).S0			
D004	8-719-073-01	DIODE MA111-(K8).S0			
D005	8-719-073-01	DIODE MA111-(K8).S0			
D006	8-719-073-01	DIODE MA111-(K8).S0			
D007	8-719-158-18	DIODE RD5.6SB3			
D013	8-719-158-18	DIODE RD5.6SB3			
D100	8-719-073-01	DIODE MA111-(K8).S0			
D300	1-216-295-11	SHORT	0		

REF. NO.	PART NO.	DESCRIPTION	REMARK
D301	8-719-073-01	DIODE MA111-(K8).S0	
D302	8-719-073-01	DIODE MA111-(K8).S0	
D317	8-719-073-01	DIODE MA111-(K8).S0	
D1200	8-719-978-69	DIODE DTZ.TT11-16B	
D1201	8-719-988-61	DIODE 1SS355TE-17	
D1202	8-719-988-61	DIODE 1SS355TE-17	
D1203	8-719-073-01	DIODE MA111-(K8).S0	
D1204	8-719-073-01	DIODE MA111-(K8).S0	
D1216	8-719-073-01	DIODE MA111-(K8).S0	
D2200	8-719-158-35	DIODE RD9.1S-B	
D2201	8-719-158-35	DIODE RD9.1S-B	
D4303	8-719-109-72	DIODE RD3.9ES-B2	
D4304	8-719-977-22	DIODE DTZ9.1	
D4305	8-719-977-22	DIODE DTZ9.1	
D4306	8-719-073-01	DIODE MA111-(K8).S0	
D4311	8-719-914-43	DIODE DAN202	
D4312	8-719-914-43	DIODE DAN202	
D4313	8-719-401-63	DIODE MA3062M-TX	
D4314	8-719-073-01	DIODE MA111-(K8).S0	
D8301	8-719-158-35	DIODE RD9.1S-B	
D8302	8-719-158-35	DIODE RD9.1S-B	
D8303	8-719-158-35	DIODE RD9.1S-B	
D8304	8-719-158-35	DIODE RD9.1S-B	
D8305	8-719-158-35	DIODE RD9.1S-B	
D8306	8-719-158-35	DIODE RD9.1S-B	
D8307	8-719-158-35	DIODE RD9.1S-B	
D8308	8-719-158-35	DIODE RD9.1S-B	
D8309	8-719-158-35	DIODE RD9.1S-B	
D8310	8-719-158-35	DIODE RD9.1S-B	
D8311	8-719-158-35	DIODE RD9.1S-B	
D8312	8-719-158-35	DIODE RD9.1S-B	
D8313	8-719-158-35	DIODE RD9.1S-B	
D8314	8-719-158-35	DIODE RD9.1S-B	
D8315	8-719-158-35	DIODE RD9.1S-B	
D8316	8-719-158-35	DIODE RD9.1S-B	
D8320	8-719-158-35	DIODE RD9.1S-B	
D8321	8-719-158-35	DIODE RD9.1S-B	
D8322	8-719-158-35	DIODE RD9.1S-B	
D8323	8-719-158-35	DIODE RD9.1S-B	
D8324	8-719-158-35	DIODE RD9.1S-B	
D8325	8-719-158-35	DIODE RD9.1S-B	
D8331	8-719-041-97	DIODE MA113-(TX)	
		<FERRITE BEAD>	
FB002	1-414-233-22	INDUCTOR CHIP 0UH	
FB003	1-414-233-22	INDUCTOR CHIP 0UH	
FB004	1-414-233-22	INDUCTOR CHIP 0UH	
FB005	1-414-233-22	INDUCTOR CHIP 0UH	
FB006	1-414-233-22	INDUCTOR CHIP 0UH	
FB008	1-414-233-22	INDUCTOR CHIP 0UH	
FB1300	1-216-295-11	SHORT 0	
FB2300	1-410-397-21	FERRITE 1.1UH	
FB4387	1-216-295-11	SHORT 0	
FB4388	1-216-295-11	SHORT 0	
FB4389	1-216-295-11	SHORT 0	

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REF. NO.	PART NO.	DESCRIPTION	REMARK
		<FILTER>	
FL001	1-236-071-11	ENCAPSULATED COMPONENT	
FL8301	1-236-071-11	ENCAPSULATED COMPONENT	
FL8303	1-236-071-11	ENCAPSULATED COMPONENT	
FL8304	1-236-071-11	ENCAPSULATED COMPONENT	
FL8305	1-236-071-11	ENCAPSULATED COMPONENT	
FL8311	1-236-071-11	ENCAPSULATED COMPONENT	
		<IC>	
IC001	8-752-917-78	IC CXP750096-030Q	
IC002	8-759-663-29	IC MM1476AF(TP)	
IC003	8-759-527-77	IC M24C16-MN6T	
IC100	8-759-042-02	IC S-80743AL-A7-S	
IC1200	8-759-100-96	IC UPC4558G2	
IC1201	8-759-678-92	IC BH3868AFS-E2	
IC1203	8-759-100-96	IC UPC4558G2	
IC1204	8-759-690-61	IC AN7583Z	
IC1205	8-759-711-10	IC NJU4066BM	
IC1206	8-759-689-71	IC NJM2188M-TE2	
IC2200	8-759-745-64	IC NJM4560M	
IC2300	8-759-666-90	IC TDA9181T	
IC2600	8-759-095-63	IC PQ09RF2	
IC2601	8-759-065-07	IC PQ05RF2	
IC2603	8-759-445-59	IC BA033T	
IC2604	8-749-015-18	IC PQ07VZ012P	
IC4301	8-752-090-87	IC CXA2100AQ	
IC8302	8-752-080-04	IC CXA2069Q	
IC8306	8-752-096-06	IC CXA2163Q-T6	
IC8309	8-759-337-26	IC MM1115XFBE	
IC8310	8-759-572-04	IC TDA9178T/N1.118	
IC8312	8-759-485-79	IC TC7SET08FU(TE85R)	
		<JACK>	
J8301	1-784-646-11	TERMINAL, S	
J8302	1-778-387-11	JACK BLOCK, PIN 12P	
		<CHIP CONDUCTOR>	
JR001	1-216-295-11	SHORT 0	
JR102	1-216-295-11	SHORT 0	
JR107	1-216-295-11	SHORT 0	
JR109	1-216-295-11	SHORT 0 (KV-EX29M87)	
JR1210	1-216-295-11	SHORT 0	
JR1213	1-216-295-11	SHORT 0	
JR1214	1-217-671-11	RES-CHIP 1 5%	1/10W
JR1215	1-216-295-11	SHORT 0	
JR1216	1-216-295-11	SHORT 0	
JR1219	1-216-295-11	SHORT 0	
JR1301	1-216-295-11	SHORT 0 (Except KV-EX29M65/EX29M93)	
JR4301	1-216-295-11	SHORT 0	
JR4302	1-216-295-11	SHORT 0	
JR4303	1-216-295-11	SHORT 0	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>	
L001	1-414-856-11	INDUCTOR 10UH	
L002	1-414-856-11	INDUCTOR 10UH	
L003	1-414-751-11	INDUCTOR 1UH	
L005	1-414-856-11	INDUCTOR 10UH	
L006	1-412-525-31	INDUCTOR 10UH	
L101	1-414-856-11	INDUCTOR 10UH	
L102	1-414-856-11	INDUCTOR 10UH	
L103	1-414-856-11	INDUCTOR 10UH	
L104	1-414-856-11	INDUCTOR 10UH	
L105	1-414-856-11	INDUCTOR 10UH	
L1200	1-414-856-11	INDUCTOR 10UH	
L1201	1-414-856-11	INDUCTOR 10UH	
L1300	1-414-856-11	INDUCTOR 10UH	
L2300	1-414-856-11	INDUCTOR 10UH	
L3302	1-414-856-11	INDUCTOR 10UH (Except KV-EX29M65/EX29M93)	
L3303	1-414-856-11	INDUCTOR 10UH (Except KV-EX29M65/EX29M93)	
L3304	1-414-856-11	INDUCTOR 10UH (Except KV-EX29M65/EX29M93)	
L3305	1-414-856-11	INDUCTOR 10UH (Except KV-EX29M65/EX29M93)	
L3306	1-414-856-11	INDUCTOR 10UH (Except KV-EX29M65/EX29M93)	
L4301	1-412-029-11	INDUCTOR CHIP 10UH	
L4302	1-412-029-11	INDUCTOR CHIP 10UH	
L4303	1-412-030-11	INDUCTOR CHIP 22UH	
L4304	1-412-029-11	INDUCTOR CHIP 10UH	
L4305	1-412-029-11	INDUCTOR CHIP 10UH	
L4306	1-412-029-11	INDUCTOR CHIP 10UH	
L4308	1-412-031-11	INDUCTOR CHIP 47UH	
L4309	1-412-031-11	INDUCTOR CHIP 47UH	
L4311	1-412-002-31	INDUCTOR CHIP 4.7UH	
L8302	1-414-196-41	INDUCTOR 47UH	
L8303	1-414-196-41	INDUCTOR 47UH	
L8304	1-414-196-41	INDUCTOR 47UH	
		<IC LINK>	
PS1201	1-533-597-41	LINK, IC	
		<TRANSISTOR>	
Q001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q002	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q003	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q004	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q005	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q006	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q007	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q101	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q313	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1203	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q1204	8-729-224-62	TRANSISTOR 2SK246GR	

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REF. NO.	PART NO.	DESCRIPTION	REMARK
Q1205	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1206	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q1207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1208	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q1209	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q1210	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q2200	1-801-806-11	TRANSISTOR DTC144EKA	
Q2201	1-801-806-11	TRANSISTOR DTC144EKA	
Q2304	8-729-421-19	TRANSISTOR UN2213	
Q2305	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q2306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q3300	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR (Except KV-EX29M65/EX29M93)	
Q4300	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q4301	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4303	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q4304	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4307	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4310	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4311	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4312	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4313	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q4314	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4315	1-801-806-11	TRANSISTOR DTC144EKA	
Q4316	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4317	8-729-900-53	TRANSISTOR DTC114EKA	
Q4318	8-729-230-49	TRANSISTOR 2SC2712-YG (Except KV-EX34M97)	
Q4319	8-729-216-22	TRANSISTOR 2SA1162-G	
Q8301	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8302	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8303	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8304	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8306	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8310	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8319	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8320	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8321	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8326	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8327	1-801-806-11	TRANSISTOR DTC144EKA	
Q8328	1-801-806-11	TRANSISTOR DTC144EKA	
Q8329	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8330	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8331	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8332	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8333	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8334	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8335	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8336	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8337	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8344	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8351	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8352	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q8358	1-801-806-11	TRANSISTOR DTC144EKA	
Q8359	1-801-806-11	TRANSISTOR DTC144EKA	
Q8360	1-801-806-11	TRANSISTOR DTC144EKA	
Q8361	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8362	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8363	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q8364	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	

<RESISTOR>

R001	1-216-033-00	RES-CHIP	220	5%	1/10W
R002	1-216-033-00	RES-CHIP	220	5%	1/10W
R004	1-216-295-11	SHORT	0		
R005	1-216-295-11	SHORT	0		
R006	1-216-025-11	RES-CHIP	100	5%	1/10W
R008	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R010	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R011	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R012	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R013	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R014	1-216-025-11	RES-CHIP	100	5%	1/10W
R015	1-216-025-11	RES-CHIP	100	5%	1/10W
R016	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R017	1-216-049-11	RES-CHIP	1K	5%	1/10W
R018	1-216-045-00	RES-CHIP	680	5%	1/10W
R019	1-216-049-11	RES-CHIP	1K	5%	1/10W
R020	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R021	1-216-295-11	SHORT	0		
R022	1-216-033-00	RES-CHIP	220	5%	1/10W
R023	1-216-025-11	RES-CHIP	100	5%	1/10W
R024	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R025	1-216-049-11	RES-CHIP	1K	5%	1/10W
R026	1-216-049-11	RES-CHIP	1K	5%	1/10W
R027	1-216-049-11	RES-CHIP	1K	5%	1/10W
R028	1-216-049-11	RES-CHIP	1K	5%	1/10W
R029	1-216-049-11	RES-CHIP	1K	5%	1/10W
R031	1-216-033-00	RES-CHIP	220	5%	1/10W
R032	1-216-049-11	RES-CHIP	1K	5%	1/10W
R033	1-216-033-00	RES-CHIP	220	5%	1/10W
R035	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R036	1-216-033-00	RES-CHIP	220	5%	1/10W
R037	1-216-033-00	RES-CHIP	220	5%	1/10W
R038	1-216-045-00	RES-CHIP	680	5%	1/10W
R039	1-216-025-11	RES-CHIP	100	5%	1/10W
R040	1-216-033-00	RES-CHIP	220	5%	1/10W
R041	1-216-025-11	RES-CHIP	100	5%	1/10W
R042	1-216-295-11	SHORT	0		
R043	1-216-025-11	RES-CHIP	100	5%	1/10W
R044	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R046	1-216-033-00	RES-CHIP	220	5%	1/10W
R047	1-216-033-00	RES-CHIP	220	5%	1/10W
R048	1-216-073-00	RES-CHIP	10K	5%	1/10W
R051	1-216-049-11	RES-CHIP	1K	5%	1/10W
R052	1-216-049-11	RES-CHIP	1K	5%	1/10W
R053	1-216-049-11	RES-CHIP	1K	5%	1/10W
R054	1-216-049-11	RES-CHIP	1K	5%	1/10W
R055	1-216-295-11	SHORT	0		
R058	1-216-295-11	SHORT	0		
R061	1-216-025-11	RES-CHIP	100	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R063	1-216-025-11	RES-CHIP	100	5%	1/10W
R064	1-216-025-11	RES-CHIP	100	5%	1/10W
R065	1-216-045-00	RES-CHIP	680	5%	1/10W
R066	1-216-049-11	RES-CHIP	1K	5%	1/10W
R068	1-216-073-00	RES-CHIP	10K	5%	1/10W
R069	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R070	1-216-033-00	RES-CHIP	220	5%	1/10W
R071	1-216-025-11	RES-CHIP	100	5%	1/10W
R072	1-216-025-11	RES-CHIP	100	5%	1/10W
R073	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R074	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R075	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R076	1-216-295-11	SHORT	0		
R077	1-216-025-11	RES-CHIP	100	5%	1/10W
R078	1-216-295-11	SHORT	0		
R079	1-216-025-11	RES-CHIP	100	5%	1/10W
R080	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R081	1-216-025-11	RES-CHIP	100	5%	1/10W
R082	1-216-041-00	RES-CHIP	470	5%	1/10W
R083	1-216-049-11	RES-CHIP	1K	5%	1/10W
R084	1-216-049-11	RES-CHIP	1K	5%	1/10W
R085	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R086	1-216-073-00	RES-CHIP	10K	5%	1/10W
R087	1-216-033-00	RES-CHIP	220	5%	1/10W
R088	1-216-049-11	RES-CHIP	1K	5%	1/10W
R093	1-216-073-00	RES-CHIP	10K	5%	1/10W
R094	1-216-073-00	RES-CHIP	10K	5%	1/10W
R095	1-216-049-11	RES-CHIP	1K	5%	1/10W
R096	1-216-049-11	RES-CHIP	1K	5%	1/10W
R097	1-216-025-11	RES-CHIP	100	5%	1/10W
R098	1-216-025-11	RES-CHIP	100	5%	1/10W
R099	1-216-025-11	RES-CHIP	100	5%	1/10W
R101	1-216-025-11	RES-CHIP	100	5%	1/10W
R102	1-216-025-11	RES-CHIP	100	5%	1/10W
R105	1-216-295-11	SHORT	0		
R109	1-216-041-00	RES-CHIP	470	5%	1/10W
R110	1-216-043-91	RES-CHIP	560	5%	1/10W
R111	1-216-025-11	RES-CHIP	100	5%	1/10W
R112	1-216-025-11	RES-CHIP	100	5%	1/10W
R116	1-216-025-11	RES-CHIP	100	5%	1/10W
R117	1-216-025-11	RES-CHIP	100	5%	1/10W
R118	1-216-025-11	RES-CHIP	100	5%	1/10W
R119	1-216-017-91	RES-CHIP	47	5%	1/10W
		(Except KV-EX34M97)			
R120	1-216-025-11	RES-CHIP	100	5%	1/10W
		(Except KV-EX29M39/EX29M65)			
R121	1-216-017-91	RES-CHIP	47	5%	1/10W
		(Except KV-EX34M97)			
R122	1-216-025-11	RES-CHIP	100	5%	1/10W
		(Except KV-EX29M39/EX29M65)			
R123	1-216-025-11	RES-CHIP	100	5%	1/10W
R124	1-216-025-11	RES-CHIP	100	5%	1/10W
R301	1-216-113-00	RES-CHIP	470K	5%	1/10W
R302	1-216-089-11	RES-CHIP	47K	5%	1/10W
R303	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1200	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R1201	1-216-061-00	RES-CHIP	3.3K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1202	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R1203	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1204	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1205	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1206	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1207	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R1210	1-216-095-00	RES-CHIP	82K	5%	1/10W
R1211	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1212	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1213	1-216-085-00	RES-CHIP	33K	5%	1/10W
R1214	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R1215	1-216-095-00	RES-CHIP	82K	5%	1/10W
R1216	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R1217	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1218	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R1219	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1220	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1221	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R1222	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R1223	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1224	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1225	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R1227	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R1228	1-249-405-11	CARBON	100	5%	1/4W
R1229	1-249-405-11	CARBON	100	5%	1/4W
R1230	1-249-405-11	CARBON	100	5%	1/4W
R1231	1-216-295-11	SHORT	0		
R1232	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1233	1-216-093-91	RES-CHIP	68K	5%	1/10W
R1234	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1235	1-216-093-91	RES-CHIP	68K	5%	1/10W
R1236	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1237	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1238	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1239	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1240	1-216-041-00	RES-CHIP	470	5%	1/10W
R1241	1-216-295-11	SHORT	0		
R1242	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1243	1-216-097-11	RES-CHIP	100K	5%	1/10W
R1244	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1245	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1246	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R1247	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1248	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R1249	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1250	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R1251	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1252	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1253	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1254	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1256	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1257	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1258	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1259	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1260	1-216-041-00	RES-CHIP	470	5%	1/10W
R1262	1-249-389-11	CARBON	4.7	5%	1/4W
R1263	1-216-073-00	RES-CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R1265	1-249-397-11	CARBON	22	5%	1/4W
R1268	1-249-397-11	CARBON	22	5%	1/4W
R1288	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1289	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1290	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1291	1-216-091-00	RES-CHIP	56K	5%	1/10W
R1292	1-216-085-00	RES-CHIP	33K	5%	1/10W
R1293	1-216-089-11	RES-CHIP	47K	5%	1/10W
R1294	1-216-025-11	RES-CHIP	100	5%	1/10W
R2200	1-216-021-00	RES-CHIP	68	5%	1/10W
R2201	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2202	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2203	1-216-021-00	RES-CHIP	68	5%	1/10W
R2204	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2205	1-216-097-11	RES-CHIP	100K	5%	1/10W
R2206	1-216-117-00	RES-CHIP	680K	5%	1/10W
R2207	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2208	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2209	1-216-117-00	RES-CHIP	680K	5%	1/10W
R2210	1-216-089-11	RES-CHIP	47K	5%	1/10W
R2211	1-216-097-11	RES-CHIP	100K	5%	1/10W
R2212	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2213	1-216-089-11	RES-CHIP	47K	5%	1/10W
R2214	1-216-089-11	RES-CHIP	47K	5%	1/10W
R2215	1-216-089-11	RES-CHIP	47K	5%	1/10W
R2310	1-216-033-00	RES-CHIP	220	5%	1/10W
R2311	1-216-033-00	RES-CHIP	220	5%	1/10W
R2312	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2313	1-216-041-00	RES-CHIP	470	5%	1/10W
R2314	1-216-029-00	RES-CHIP	150	5%	1/10W
R2315	1-216-049-11	RES-CHIP	1K	5%	1/10W
R2316	1-218-179-11	RES-CHIP	10M	5%	1/10W
R2603	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R2604	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R2605	1-216-371-00	METAL OXIDE	1.5	5%	2W
R3300	1-216-043-91	RES-CHIP (Except KV-EX29M65/EX29M93)	560	5%	1/10W
R3304	1-216-041-00	RES-CHIP (Except KV-EX29M65/EX29M93)	470	5%	1/10W
R3320	1-216-073-00	RES-CHIP (Except KV-EX29M65/EX29M93)	10K	5%	1/10W
R3323	1-216-025-11	RES-CHIP (Except KV-EX29M65/EX29M93)	100	5%	1/10W
R3334	1-216-025-11	RES-CHIP (Except KV-EX29M65/EX29M93)	100	5%	1/10W
R3362	1-216-025-11	RES-CHIP (Except KV-EX29M65/EX29M93)	100	5%	1/10W
R3374	1-216-295-11	SHORT (Except KV-EX29M65/EX29M93)	0		
R4300	1-216-025-11	RES-CHIP	100	5%	1/10W
R4301	1-216-025-11	RES-CHIP	100	5%	1/10W
R4302	1-216-025-11	RES-CHIP	100	5%	1/10W
R4303	1-216-025-11	RES-CHIP	100	5%	1/10W
R4304	1-216-025-11	RES-CHIP	100	5%	1/10W
R4305	1-216-025-11	RES-CHIP	100	5%	1/10W
R4306	1-216-025-11	RES-CHIP (Except KV-EX29M39/EX29M65)	100	5%	1/10W
R4307	1-216-025-11	RES-CHIP (Except KV-EX29M39/EX29M65)	100	5%	1/10W
R4308	1-216-295-11	SHORT	0		
R4310	1-216-295-11	SHORT	0		
R4312	1-216-295-11	SHORT	0		
R4313	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4314	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4316	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R4317	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4318	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R4319	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R4320	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4321	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R4323	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4324	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R4325	1-208-818-11	METAL CHIP	33K	0.5%	1/10W
R4326	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
R4327	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R4329	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R4330	1-216-089-11	RES-CHIP	47K	5%	1/10W
R4335	1-216-025-11	RES-CHIP	100	5%	1/10W
R4336	1-216-025-11	RES-CHIP	100	5%	1/10W
R4337	1-216-025-11	RES-CHIP	100	5%	1/10W
R4338	1-216-041-00	RES-CHIP	470	5%	1/10W
R4339	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R4341	1-216-295-11	SHORT	0		
R4343	1-216-025-11	RES-CHIP	100	5%	1/10W
R4344	1-216-025-11	RES-CHIP	100	5%	1/10W
R4345	1-216-075-00	RES-CHIP	12K	5%	1/10W
R4346	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R4347	1-216-025-11	RES-CHIP	100	5%	1/10W
R4348	1-216-025-11	RES-CHIP	100	5%	1/10W
R4349	1-216-041-00	RES-CHIP	470	5%	1/10W
R4350	1-216-025-11	RES-CHIP	100	5%	1/10W
R4351	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4352	1-216-041-00	RES-CHIP	470	5%	1/10W
R4353	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R4354	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4357	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4358	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R4359	1-216-043-91	RES-CHIP	560	5%	1/10W
R4360	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4361	1-216-133-00	RES-CHIP	3.3M	5%	1/10W
R4363	1-216-025-11	RES-CHIP	100	5%	1/10W
R4365	1-216-025-11	RES-CHIP	100	5%	1/10W
R4366	1-216-025-11	RES-CHIP	100	5%	1/10W
R4367	1-216-025-11	RES-CHIP	100	5%	1/10W
R4369	1-216-025-11	RES-CHIP	100	5%	1/10W
R4370	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4372	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4373	1-216-295-11	SHORT	0		
R4374	1-216-025-11	RES-CHIP	100	5%	1/10W
R4375	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4376	1-216-025-11	RES-CHIP	100	5%	1/10W
R4377	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4380	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4381	1-208-851-11	METAL CHIP	750K	0.5%	1/10W
R4382	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4383	1-208-825-11	METAL CHIP	62K	0.5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R4384	1-216-025-11	RES-CHIP	100	5%	1/10W
R4385	1-216-295-11	SHORT	0		
R4387	1-216-295-11	SHORT	0		
R4388	1-216-295-11	SHORT	0		
R4389	1-216-295-11	SHORT	0		
R4390	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4391	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4392	1-216-089-11	RES-CHIP	47K	5%	1/10W
R4395	1-216-295-11	SHORT	0		
R4396	1-216-295-11	SHORT	0		
R4397	1-216-295-11	SHORT	0		
R4399	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4401	1-216-105-91	RES-CHIP	220K	5%	1/10W
R4402	1-216-129-00	RES-CHIP (Except KV-EX34M97)	2.2M	5%	1/10W
R4403	1-216-049-11	RES-CHIP (Except KV-EX34M97)	1K	5%	1/10W
R4404	1-208-814-91	METAL CHIP (Except KV-EX34M97)	22K	0.5%	1/10W
R4406	1-216-097-11	RES-CHIP (Except KV-EX34M97)	100K	5%	1/10W
R4408	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4409	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4411	1-208-808-11	METAL CHIP (Except KV-EX34M97)	12K	0.5%	1/10W
R4411	1-208-820-11	METAL CHIP (KV-EX34M97)	39K	0.5%	1/10W
R4412	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4413	1-208-829-11	METAL CHIP (Except KV-EX34M97)	91K	0.5%	1/10W
R4413	1-208-838-91	METAL CHIP (KV-EX34M97)	220K	0.5%	1/10W
R4504	1-216-295-11	SHORT	0		
R4505	1-216-295-11	SHORT	0		
R4506	1-216-295-11	SHORT	0		
R4518	1-216-025-11	RES-CHIP	100	5%	1/10W
R4519	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4520	1-216-025-11	RES-CHIP (Except KV-EX29M39/EX29M65)	100	5%	1/10W
R4521	1-216-025-11	RES-CHIP (Except KV-EX29M39/EX29M65)	100	5%	1/10W
R8300	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8301	1-216-041-00	RES-CHIP	470	5%	1/10W
R8302	1-216-041-00	RES-CHIP	470	5%	1/10W
R8303	1-216-021-00	RES-CHIP	68	5%	1/10W
R8304	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R8305	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8306	1-216-022-00	RES-CHIP	75	5%	1/10W
R8307	1-216-022-00	RES-CHIP	75	5%	1/10W
R8308	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8309	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8310	1-216-022-00	RES-CHIP	75	5%	1/10W
R8311	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8312	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8313	1-216-022-00	RES-CHIP	75	5%	1/10W
R8314	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8315	1-216-105-91	RES-CHIP	220K	5%	1/10W
R8316	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8321	1-216-025-11	RES-CHIP (KV-EX29M39/EX29M65)	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R8322	1-216-022-00	RES-CHIP	75	5%	1/10W
R8323	1-216-295-11	SHORT	0		
R8324	1-216-295-11	SHORT	0		
R8325	1-216-295-11	SHORT	0		
R8326	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8327	1-216-295-11	SHORT	0		
R8328	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8329	1-216-113-00	RES-CHIP	470K	5%	1/10W
R8330	1-216-022-00	RES-CHIP	75	5%	1/10W
R8331	1-216-025-11	RES-CHIP (KV-EX29M39/EX29M65)	100	5%	1/10W
R8332	1-216-025-11	RES-CHIP (KV-EX29M39/EX29M65)	100	5%	1/10W
R8333	1-216-025-11	RES-CHIP (KV-EX29M39/EX29M65)	100	5%	1/10W
R8334	1-216-295-11	SHORT	0		
R8336	1-216-295-11	SHORT	0		
R8337	1-216-022-00	RES-CHIP	75	5%	1/10W
R8338	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8339	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8340	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8341	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8342	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8343	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8344	1-216-022-00	RES-CHIP	75	5%	1/10W
R8345	1-216-033-00	RES-CHIP	220	5%	1/10W
R8346	1-216-031-00	RES-CHIP	180	5%	1/10W
R8347	1-216-025-11	RES-CHIP	100	5%	1/10W
R8348	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R8349	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8350	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8351	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8352	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8353	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8354	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R8355	1-216-295-11	SHORT	0		
R8356	1-216-295-11	SHORT	0		
R8357	1-216-017-91	RES-CHIP	47	5%	1/10W
R8358	1-216-017-91	RES-CHIP	47	5%	1/10W
R8361	1-216-017-91	RES-CHIP	47	5%	1/10W
R8364	1-216-041-00	RES-CHIP	470	5%	1/10W
R8365	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8366	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R8367	1-216-041-00	RES-CHIP	470	5%	1/10W
R8370	1-216-025-11	RES-CHIP	100	5%	1/10W
R8372	1-216-295-11	SHORT	0		
R8373	1-216-295-11	SHORT	0		
R8376	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8377	1-216-025-11	RES-CHIP	100	5%	1/10W
R8378	1-216-033-00	RES-CHIP	220	5%	1/10W
R8379	1-216-033-00	RES-CHIP	220	5%	1/10W
R8380	1-216-025-11	RES-CHIP	100	5%	1/10W
R8381	1-216-025-11	RES-CHIP	100	5%	1/10W
R8382	1-216-033-00	RES-CHIP	220	5%	1/10W
R8383	1-216-033-00	RES-CHIP	220	5%	1/10W
R8384	1-216-025-11	RES-CHIP	100	5%	1/10W
R8388	1-216-031-00	RES-CHIP	180	5%	1/10W
R8389	1-216-033-00	RES-CHIP	220	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R8395	1-216-033-00	RES-CHIP	220	5%	1/10W
R8396	1-216-033-00	RES-CHIP	220	5%	1/10W
R8399	1-216-025-11	RES-CHIP	100	5%	1/10W
R8400	1-216-025-11	RES-CHIP	100	5%	1/10W
R8411	1-216-083-00	RES-CHIP	27K	5%	1/10W
R8414	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R8415	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8417	1-216-025-11	RES-CHIP	100	5%	1/10W
R8418	1-216-025-11	RES-CHIP	100	5%	1/10W
R8419	1-216-017-91	RES-CHIP	47	5%	1/10W
R8420	1-216-017-91	RES-CHIP	47	5%	1/10W
R8435	1-216-295-11	SHORT	0		
R8441	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8442	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8446	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8447	1-216-025-11	RES-CHIP	100	5%	1/10W
R8448	1-216-025-11	RES-CHIP	100	5%	1/10W
R8449	1-216-025-11	RES-CHIP	100	5%	1/10W
R8450	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8451	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8452	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8453	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8454	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8455	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8464	1-216-025-11	RES-CHIP	100	5%	1/10W
R8465	1-216-025-11	RES-CHIP	100	5%	1/10W
R8466	1-216-025-11	RES-CHIP	100	5%	1/10W
R8467	1-216-041-00	RES-CHIP	470	5%	1/10W
R8468	1-216-041-00	RES-CHIP	470	5%	1/10W
R8469	1-216-041-00	RES-CHIP	470	5%	1/10W
R8470	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R8471	1-216-025-11	RES-CHIP	100	5%	1/10W
R8478	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8479	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8480	1-216-073-00	RES-CHIP	10K	5%	1/10W
R8481	1-216-095-00	RES-CHIP	82K	5%	1/10W
R8482	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8484	1-216-045-00	RES-CHIP	680	5%	1/10W
R8485	1-216-037-00	RES-CHIP	330	5%	1/10W
R8486	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8487	1-216-045-00	RES-CHIP	680	5%	1/10W
R8488	1-216-041-00	RES-CHIP	470	5%	1/10W
R8489	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8490	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8491	1-216-025-11	RES-CHIP	100	5%	1/10W
R8492	1-216-041-00	RES-CHIP	470	5%	1/10W
R8493	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8494	1-216-041-00	RES-CHIP	470	5%	1/10W
R8495	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8496	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8497	1-216-025-11	RES-CHIP	100	5%	1/10W
R8498	1-216-043-91	RES-CHIP	560	5%	1/10W
R8499	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8500	1-216-033-00	RES-CHIP	220	5%	1/10W
R8501	1-216-081-00	RES-CHIP	22K	5%	1/10W
R8502	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8507	1-216-025-11	RES-CHIP	100	5%	1/10W
R8508	1-216-025-11	RES-CHIP	100	5%	1/10W
R8513	1-216-039-00	RES-CHIP	390	5%	1/10W
R8514	1-216-039-00	RES-CHIP	390	5%	1/10W
R8515	1-216-295-11	SHORT	0		
R8516	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8518	1-216-047-91	RES-CHIP	820	5%	1/10W
R8519	1-216-047-91	RES-CHIP	820	5%	1/10W
R8536	1-216-025-11	RES-CHIP	100	5%	1/10W
R8538	1-216-041-00	RES-CHIP	470	5%	1/10W
R8540	1-216-041-00	RES-CHIP	470	5%	1/10W
R8541	1-216-039-00	RES-CHIP	390	5%	1/10W
R8551	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8576	1-216-013-00	RES-CHIP	33	5%	1/10W
R8577	1-216-295-11	SHORT	0		
R8578	1-216-033-00	RES-CHIP	220	5%	1/10W
R8579	1-216-295-11	SHORT	0		
R8582	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8583	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8584	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R8593	1-216-025-11	RES-CHIP	100	5%	1/10W

<TUNER>

TU101	8-598-452-20	TUNER, FSS BTF-WG442 (KV-EX29M39)
TU101	8-598-452-30	TUNER, FSS BTF-WG442 (KV-EX34M97)
TU101	8-598-451-00	TUNER, FSS BTF-WG441 (KV-EX29M65)
TU101	8-598-450-10	TUNER, FSS BTF-LG434 (KV-EX29M87)
TU101	8-598-451-30	TUNER, FSS BTF-WG441 (KV-EX29M93)
TU3301	8-598-508-10	TUNER, FSS BTF-LG436 (Except KV-EX29M65/EX29M93)

<CRYSTAL>

X001	1-567-928-11	VIBLATOR, CERAMIC
X4300	1-767-127-11	VIBRATOR, CERAMIC
X8301	1-781-612-11	VIBRATOR, CRYSTAL

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* A-1136-132-A B3 BOARD COMPLETE
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<CAPACITOR>

C501	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C502	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C503	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C505	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C507	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C509	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C511	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C512	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C514	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C515	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C516	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C517	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C518	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C519	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C520	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C521	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C522	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C523	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C524	1-124-779-00	ELECT CHIP	10UF	20.00%	16V
C525	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C526	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C527	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C528	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C539	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C540	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C543	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C545	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C546	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C548	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C549	1-126-204-11	ELECT CHIP	47UF	20.00%	16V
C550	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C551	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C554	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C555	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C556	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C557	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C559	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C560	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C601	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C602	1-126-394-11	ELECT CHIP	10UF	20.00%	16V
C603	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C604	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C605	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C606	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C607	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C608	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C609	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C610	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C611	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C612	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C613	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C614	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C615	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C616	1-126-396-11	ELECT CHIP	47UF	20.00%	16V
C617	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C618	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C619	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C620	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C621	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C622	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C623	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C624	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C625	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C626	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C627	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C628	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C629	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C630	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C631	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C632	1-126-206-11	ELECT CHIP	100UF	20.00%	6.3V
C633	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C634	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C635	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C636	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C637	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C638	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C639	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C640	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C642	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C643	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C644	1-126-398-11	ELECT CHIP	4.7UF	20.00%	35V
C645	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
		<CONNECTOR>			
CN502	1-793-497-11	CONNECTOR, BOARD TO BOARD 40P			
		<DIODE>			
D501	8-719-422-12	DIODE MA8039			
D601	8-719-073-01	DIODE MA111-(K8).S0			
		<FERRITE BEAD>			
FB501	1-414-813-11	FERRITE	0UH		
FB502	1-414-813-11	FERRITE	0UH		
FB503	1-414-813-11	FERRITE	0UH		
FB504	1-414-813-11	FERRITE	0UH		
FB601	1-414-553-11	FERRITE	0UH		
		<FILTER>			
FL501	1-233-877-11	FILTER, LOW PASS			
FL502	1-233-504-21	FILTER, LOW PASS			
FL503	1-233-504-21	FILTER, LOW PASS			
FL504	1-234-177-21	FILTER, CHIP EMI			
FL505	1-234-177-21	FILTER, CHIP EMI			
FL506	1-234-177-21	FILTER, CHIP EMI			
FL509	1-234-177-21	FILTER, CHIP EMI			
FL510	1-234-177-21	FILTER, CHIP EMI			
FL511	1-234-177-21	FILTER, CHIP EMI			
FL512	1-234-177-21	FILTER, CHIP EMI			
FL601	1-234-177-21	FILTER, CHIP EMI			
FL602	1-234-177-21	FILTER, CHIP EMI			
FL603	1-234-177-21	FILTER, CHIP EMI			
FL901	1-234-113-21	FILTER, LOW PASS			
FL902	1-234-112-21	FILTER, LOW PASS			
FL903	1-234-112-21	FILTER, LOW PASS			
		<IC>			
IC501	8-759-447-90	IC TLC5733AIPM			
IC504	8-759-669-78	IC TLC2933IPWR-12			
IC505	8-759-547-54	IC TC7SET00FU(TE85R)			

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REF. NO.	PART NO.	DESCRIPTION			REMARK
IC506	8-759-547-54	IC TC7SET00FU(TE85R)			
IC601	8-752-398-47	IC CXD2090Q			
IC602	8-759-665-38	IC MB81F161622C-80			
IC603	8-759-669-75	IC TLC2932IPW-R			
IC604	8-752-072-94	IC CXA1875AM-T4			
		<COIL>			
L501	1-412-026-11	INDUCTOR CHIP 1UH			
L503	1-412-026-11	INDUCTOR CHIP 1UH			
L505	1-412-029-11	INDUCTOR CHIP 10UH			
L506	1-412-026-11	INDUCTOR CHIP 1UH			
L508	1-412-029-11	INDUCTOR CHIP 10UH			
L509	1-412-029-11	INDUCTOR CHIP 10UH			
L512	1-412-026-11	INDUCTOR CHIP 1UH			
L604	1-412-029-11	INDUCTOR CHIP 10UH			
L605	1-412-029-11	INDUCTOR CHIP 10UH			
		<TRANSISTOR>			
Q501	8-729-216-22	TRANSISTOR 2SA1162-G			
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q503	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q516	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q517	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q518	8-729-216-22	TRANSISTOR 2SA1162-G			
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q901	8-729-216-22	TRANSISTOR 2SA1162-G			
Q902	8-729-216-22	TRANSISTOR 2SA1162-G			
Q903	8-729-216-22	TRANSISTOR 2SA1162-G			
Q907	8-729-216-22	TRANSISTOR 2SA1162-G			
Q908	8-729-216-22	TRANSISTOR 2SA1162-G			
Q909	8-729-216-22	TRANSISTOR 2SA1162-G			
		<RESISTOR>			
R501	1-216-025-11	RES-CHIP	100	5%	1/10W
R502	1-216-025-11	RES-CHIP	100	5%	1/10W
R503	1-216-295-11	SHORT	0		
R504	1-216-295-11	SHORT	0		
R505	1-216-295-11	SHORT	0		
R506	1-216-025-11	RES-CHIP	100	5%	1/10W
R507	1-216-025-11	RES-CHIP	100	5%	1/10W
R513	1-216-043-91	RES-CHIP	560	5%	1/10W
R514	1-216-043-91	RES-CHIP	560	5%	1/10W
R515	1-216-043-91	RES-CHIP	560	5%	1/10W
R516	1-216-049-11	RES-CHIP	1K	5%	1/10W
R517	1-216-049-11	RES-CHIP	1K	5%	1/10W
R518	1-216-295-11	SHORT	0		
R520	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R521	1-216-295-11	SHORT	0		
R523	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R524	1-216-295-11	SHORT	0		

REF. NO.	PART NO.	DESCRIPTION			REMARK
R526	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R528	1-216-037-00	RES-CHIP	330	5%	1/10W
R529	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R530	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R531	1-216-031-00	RES-CHIP	180	5%	1/10W
R532	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R533	1-216-031-00	RES-CHIP	180	5%	1/10W
R537	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R548	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R549	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R550	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R551	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R552	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R553	1-216-295-11	SHORT	0		
R554	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R555	1-216-077-91	RES-CHIP	15K	5%	1/10W
R557	1-216-049-11	RES-CHIP	1K	5%	1/10W
R558	1-216-025-11	RES-CHIP	100	5%	1/10W
R559	1-216-077-91	RES-CHIP	15K	5%	1/10W
R560	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R561	1-216-043-91	RES-CHIP	560	5%	1/10W
R562	1-216-043-91	RES-CHIP	560	5%	1/10W
R563	1-216-043-91	RES-CHIP	560	5%	1/10W
R571	1-216-295-11	SHORT	0		
R572	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R573	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R574	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R575	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R576	1-208-756-11	METAL CHIP	82	0.5%	1/10W
R577	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R578	1-208-750-11	METAL CHIP	47	0.5%	1/10W
R579	1-216-077-91	RES-CHIP	15K	5%	1/10W
R580	1-216-295-11	SHORT	0		
R598	1-216-025-11	RES-CHIP	100	5%	1/10W
R600	1-216-066-00	RES-CHIP	5.1K	5%	1/10W
R601	1-216-073-00	RES-CHIP	10K	5%	1/10W
R602	1-216-073-00	RES-CHIP	10K	5%	1/10W
R603	1-216-073-00	RES-CHIP	10K	5%	1/10W
R604	1-216-033-00	RES-CHIP	220	5%	1/10W
R605	1-216-295-11	SHORT	0		
R608	1-216-295-11	SHORT	0		
R609	1-216-073-00	RES-CHIP	10K	5%	1/10W
R610	1-216-033-00	RES-CHIP	220	5%	1/10W
R611	1-216-073-00	RES-CHIP	10K	5%	1/10W
R612	1-216-073-00	RES-CHIP	10K	5%	1/10W
R613	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R614	1-216-295-11	SHORT	0		
R615	1-216-089-11	RES-CHIP	47K	5%	1/10W
R616	1-216-073-00	RES-CHIP	10K	5%	1/10W
R617	1-216-295-11	SHORT	0		
R619	1-216-073-00	RES-CHIP	10K	5%	1/10W
R621	1-216-295-11	SHORT	0		
R622	1-216-295-11	SHORT	0		
R623	1-216-295-11	SHORT	0		
R624	1-216-295-11	SHORT	0		
R626	1-216-073-00	RES-CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R628	1-216-295-11	SHORT	0		
R629	1-216-073-00	RES-CHIP	10K	5%	1/10W
R631	1-216-295-11	SHORT	0		
R634	1-216-295-11	SHORT	0		
R635	1-216-295-11	SHORT	0		
R638	1-216-295-11	SHORT	0		
R639	1-216-017-91	RES-CHIP	47	5%	1/10W
R640	1-216-009-91	RES-CHIP	22	5%	1/10W
R642	1-216-295-11	SHORT	0		
R643	1-216-295-11	SHORT	0		
R645	1-216-295-11	SHORT	0		
R647	1-216-295-11	SHORT	0		
R650	1-211-960-11	METAL CHIP	22	0.5%	1/10W
R651	1-216-295-11	SHORT	0		
R653	1-216-025-11	RES-CHIP	100	5%	1/10W
R654	1-216-033-00	RES-CHIP	220	5%	1/10W
R655	1-216-295-11	SHORT	0		
R657	1-216-009-91	RES-CHIP	22	5%	1/10W
R658	1-216-049-11	RES-CHIP	1K	5%	1/10W
R659	1-216-025-11	RES-CHIP	100	5%	1/10W
R664	1-216-295-11	SHORT	0		
R665	1-216-035-00	RES-CHIP	270	5%	1/10W
R666	1-216-646-11	METAL CHIP	620	0.5%	1/10W
R667	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R668	1-216-017-91	RES-CHIP	47	5%	1/10W
R670	1-216-295-11	SHORT	0		
R671	1-216-073-00	RES-CHIP	10K	5%	1/10W
R672	1-216-073-00	RES-CHIP	10K	5%	1/10W
R673	1-216-073-00	RES-CHIP	10K	5%	1/10W
R674	1-216-073-00	RES-CHIP	10K	5%	1/10W
R675	1-216-073-00	RES-CHIP	10K	5%	1/10W
R676	1-216-073-00	RES-CHIP	10K	5%	1/10W
R677	1-216-073-00	RES-CHIP	10K	5%	1/10W
R678	1-216-073-00	RES-CHIP	10K	5%	1/10W
R679	1-216-073-00	RES-CHIP	10K	5%	1/10W
R680	1-216-073-00	RES-CHIP	10K	5%	1/10W
R681	1-216-073-00	RES-CHIP	10K	5%	1/10W
R682	1-216-073-00	RES-CHIP	10K	5%	1/10W
R683	1-216-073-00	RES-CHIP	10K	5%	1/10W
R684	1-216-073-00	RES-CHIP	10K	5%	1/10W
R685	1-216-073-00	RES-CHIP	10K	5%	1/10W
R686	1-216-073-00	RES-CHIP	10K	5%	1/10W
R687	1-216-295-11	SHORT	0		
R688	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R689	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R690	1-216-295-11	SHORT	0		
R691	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R692	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R693	1-216-009-91	RES-CHIP	22	5%	1/10W
R694	1-216-295-11	SHORT	0		
R695	1-216-047-91	RES-CHIP	820	5%	1/10W
R696	1-216-049-11	RES-CHIP	1K	5%	1/10W
R697	1-216-117-00	RES-CHIP	680K	5%	1/10W
R698	1-216-117-00	RES-CHIP	680K	5%	1/10W
R699	1-216-295-11	SHORT	0		
R907	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R908	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R909	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R910	1-216-049-11	RES-CHIP	1K	5%	1/10W
R911	1-216-049-11	RES-CHIP	1K	5%	1/10W
R912	1-216-049-11	RES-CHIP	1K	5%	1/10W
R942	1-216-037-00	RES-CHIP	330	5%	1/10W
R943	1-216-033-00	RES-CHIP	220	5%	1/10W
R957	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R958	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R959	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R960	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R961	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R962	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R981	1-216-037-00	RES-CHIP	330	5%	1/10W
R982	1-216-037-00	RES-CHIP	330	5%	1/10W
R983	1-216-089-11	RES-CHIP	47K	5%	1/10W
R984	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R985	1-216-113-00	RES-CHIP	470K	5%	1/10W
R986	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R987	1-216-049-11	RES-CHIP	1K	5%	1/10W
R988	1-216-033-00	RES-CHIP	220	5%	1/10W
R989	1-216-081-00	RES-CHIP	22K	5%	1/10W
R990	1-216-113-00	RES-CHIP	470K	5%	1/10W
R991	1-216-295-11	SHORT	0		
R993	1-216-089-11	RES-CHIP	47K	5%	1/10W
RB019	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB020	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB021	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB022	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB023	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB024	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB025	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB026	1-239-409-11	NETWORK RESISTOR (CHIP) 47			
RB027	1-239-409-11	NETWORK RESISTOR (CHIP) 47			

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*	A-1332-101-A	C BOARD MOUNTED (Except KV-EX34M97)			
*	A-1332-123-A	C BOARD MOUNTED (KV-EX34M97)			
		**********			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
		<CAPACITOR>			
C9002	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9003	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9004	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9005	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9006	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9007	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9008	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9009	1-163-091-00	CERAMIC CHIP	8PF	0.25PF	50V
C9010	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9011	1-136-207-11	MYLAR	0.047UF	10.00%	250V
C9012	1-136-207-11	MYLAR	0.047UF	10.00%	250V
C9014	1-136-207-11	MYLAR	0.047UF	10.00%	250V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C9015	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C9016	1-102-106-00	CERAMIC	100PF	10.00%	50V
C9018	1-107-961-91	ELECT	10UF	20.00%	250V
C9019	1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9020	1-107-961-91	ELECT	10UF	20.00%	250V
C9021	1-107-961-91	ELECT	10UF	20.00%	250V
C9022	1-101-004-00	CERAMIC	0.01UF		50V
C9023	1-101-004-00	CERAMIC	0.01UF		50V
C9024	1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9025	1-104-653-11	ELECT	220UF	20.00%	16V
C9026	1-163-035-00	CERAMIC CHIP	0.047UF		50V
C9027	1-101-004-00	CERAMIC	0.01UF		50V
C9028	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9029	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9030	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
C9031	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9032	1-162-116-00	CERAMIC	680PF	10.00%	2KV
C9033	1-107-662-11	ELECT	22UF	20.00%	250V
C9035	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C9042	1-126-940-11	ELECT	330UF	20.00%	25V
C9047	1-107-651-11	ELECT	4.7UF	20.00%	250V
		<CONNECTOR>			
CN9001*	1-564-512-11	PLUG, CONNECTOR 9P			
CN9002	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CN9003	1-695-915-11	TAB (CONTACT)			
CN9004	1-695-915-11	TAB (CONTACT)			
CN9005*	1-564-506-11	PLUG, CONNECTOR 3P			
CN9007	1-785-879-11	CONNECTOR, ONE TOUCH			
		<DIODE>			
D9002	8-719-400-75	DIODE MA3091			
D9005	8-719-073-01	DIODE MA111-(K8).S0			
D9006	8-719-051-85	DIODE HSS83TD			
D9007	8-719-051-85	DIODE HSS83TD			
D9008	8-719-051-85	DIODE HSS83TD			
D9009	8-719-908-03	DIODE GP08D			
D9010	8-719-110-17	DIODE RD10ES-B2			
		<IC>			
IC9001	8-759-360-83	IC TDA6111Q/N4			
IC9002	8-759-360-83	IC TDA6111Q/N4			
IC9003	8-759-360-83	IC TDA6111Q/N4			
		<JACK>			
J9001 ⚠	1-540-071-22	SOCKET, CRT			
		<COIL>			
L9001	1-414-158-11	INDUCTOR	2.2UH		
L9002	1-408-595-31	INDUCTOR	2.2UH		
L9003	1-408-595-31	INDUCTOR	2.2UH		
L9004	1-408-595-31	INDUCTOR	2.2UH		
L9005	1-406-666-21	INDUCTOR	150UH		
L9006	1-412-526-11	INDUCTOR	12UH		
		<NEON LAMP>			
NL9001	1-519-526-11	LAMP, NEON			
NL9003	1-519-526-11	LAMP, NEON			
		<TRANSISTOR>			
Q9001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9009	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9010	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q9011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
		<RESISTOR>			
R9001	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9006	1-216-073-00	RES-CHIP	10K	5%	1/10W
R9007	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9008	1-216-085-00	RES-CHIP	33K	5%	1/10W
R9012	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9013	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9018	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9019	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R9021	1-216-295-11	SHORT	0		
R9023	1-216-295-11	SHORT	0		
R9026	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9031	1-208-789-11	METAL CHIP	2K	0.5%	1/10W
R9033	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R9034	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R9035	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9036	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9037	1-240-233-71	METAL OXIDE	100	5%	3W
R9038	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9039	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R9041	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9042	1-216-049-11	RES-CHIP	1K	5%	1/10W
R9043	1-240-233-71	METAL OXIDE	100	5%	3W
R9044	1-240-233-71	METAL OXIDE	100	5%	3W
R9047	1-202-557-00	SOLID	220	20%	1/2W
R9048	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R9049	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R9050	1-249-424-11	CARBON	3.9K	5%	1/4W
R9051	1-202-557-00	SOLID	220	20%	1/2W
R9052	1-202-557-00	SOLID	220	20%	1/2W
R9053	1-249-424-11	CARBON	3.9K	5%	1/4W
R9054	1-249-424-11	CARBON	3.9K	5%	1/4W
R9055	1-202-884-11	SOLID	820K	20%	1/2W
R9056	1-219-752-11	CARBON	100K	5%	1/2W
R9057	1-202-847-00	SOLID	560K	20%	1/2W
R9058	1-202-884-11	SOLID	820K	20%	1/2W
R9059	1-202-818-00	SOLID	1K	20%	1/2W
R9061	1-202-549-00	SOLID	100	20%	1/2W
R9065	1-216-069-00	RES-CHIP	6.8K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R9068	1-216-101-00	RES-CHIP	150K	5%	1/10W
R9069	1-202-549-00	SOLID	100	20%	1/2W
R9070	1-216-037-00	RES-CHIP	330	5%	1/10W
R9071	1-216-037-00	RES-CHIP	330	5%	1/10W
R9072	1-216-037-00	RES-CHIP	330	5%	1/10W
R9073	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		<VARIABLE RESISTOR>			
RV9001	1-241-656-11	RES, ADJ, METAL FILM 110M			
RV9002	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M			
**********					
*	A-1346-975-A	D BOARD COMPLETE (KV-EX29M87)			
*	A-1346-989-A	D BOARD COMPLETE (EXCEPT KV-EX34M97/EX29M87)			
*	A-1346-995-A	D BOARD COMPLETE (KV-EX34M97)			
		**********			
*	4-363-146-00	HEAT SINK, V.OUT (EXCEPT KV-EX34M97)			
	4-382-854-11	SCREW (M3X10), P, SW (+) (EXCEPT KV-EX34M97)			
	4-374-846-01	COVER, CAPACITOR, CAP TYPE (KV-EX29M87)			
	4-382-854-21	SCREW (M3X14), P, SW (+) (KV-EX29M87)			
		<CAPACITOR>			
C6100	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6101	1-107-680-91	ELECT	22UF	20.00%	450V
C6102	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6103	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C6104	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C6105	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6106	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
C6107	1-137-605-11	MYLAR	0.01UF	10.00%	250V
C6108	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6109	1-126-971-11	ELECT	470UF	20.00%	50V
C6110	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C6111	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6113	1-126-965-11	ELECT	22UF	20.00%	50V
C6334	1-126-940-11	ELECT	330UF	20.00%	25V
C6600	1-128-550-11	ELECT	2200UF	20.00%	50V
C6601	1-126-967-11	ELECT	47UF	20.00%	50V
C6602	1-129-720-00	FILM	0.033UF	5.00%	630V
C6603	1-126-949-11	ELECT	220UF	20.00%	35V
C6604	1-126-967-11	ELECT	47UF	20.00%	50V
C6606	1-163-251-11	CERAMIC CHIP (KV-EX29M87)	100PF	5.00%	50V
C6607 ⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C6608 ⚠	1-119-886-51	CERAMIC	470PF	10.00%	250V
C6609	1-126-960-11	ELECT (KV-EX29M87)	1UF	20.00%	50V
C6610	1-163-251-11	CERAMIC CHIP (KV-EX29M87)	100PF	5.00%	50V
C6611	1-163-275-11	CERAMIC CHIP (KV-EX29M87)	0.001UF	5.00%	50V
C6612	1-126-964-11	ELECT	10UF	20.00%	50V
C6613	1-161-830-00	CERAMIC	0.0047UF	99%	500V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C6614	1-161-830-00	CERAMIC	0.0047UF		500V
C6615	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C6616	1-126-961-11	ELECT	2.2UF	20.00%	50V
C6617	1-161-830-00	CERAMIC	0.0047UF		500V
C6618	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6619	1-161-830-00	CERAMIC	0.0047UF	99%	500V
C6620	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6621	1-131-940-11	ELECT (KV-EX29M87)	1200MF	20.00%	250V
C6622	1-131-940-11	ELECT (KV-EX29M87)	1200MF	20.00%	250V
C6624	1-126-962-11	ELECT (EXCEPT KV-EX34M97)	3.3UF	20.00%	50V
C6624	1-126-966-11	ELECT (KV-EX34M97)	33UF	20.00%	50V
C6633	1-136-479-11	FILM	0.001UF	2.00%	50V
C6634	1-126-964-11	ELECT	10UF	20.00%	50V
C6635	1-126-963-11	ELECT	4.7UF	20.00%	50V
C6637	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6645	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C6647	1-126-964-11	ELECT	10UF	20.00%	50V
C6648	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6649	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6650	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6651	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6652	1-110-626-11	ELECT	330UF	20.00%	160V
C6653	1-137-368-11	MYLAR	0.0047UF	5.00%	50V
C6654	1-126-936-11	ELECT	3300UF	20.00%	16V
C6655	1-126-936-11	ELECT	3300UF	20.00%	16V
C6656	1-136-165-00	FILM	0.1UF	5.00%	50V
C6658	1-104-330-91	CERAMIC	470PF	10.00%	1KV
C6660	1-126-960-11	ELECT	1UF	20.00%	50V
C6661	1-104-664-11	ELECT	47UF	20.00%	16V
C6662	1-104-664-11	ELECT	47UF	20.00%	16V
C6665	1-126-964-11	ELECT	10UF	20.00%	50V
C6666	1-137-150-11	MYLAR	0.01UF	5.00%	50V
C6668	1-104-664-11	ELECT	47UF	20.00%	25V
C6669	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6670	1-125-969-91	CERAMIC	680PF	10.00%	1KV
C6672	1-135-946-21	FILM	47000PF	3%	800V
C6673	1-136-189-00	MYLAR	0.1UF	10.00%	250V
C6674	1-128-527-11	ELECT	330UF	20.00%	25V
C6679	1-107-823-11	CERAMIC CHIP	0.47UF	10.00%	16V
C6680	1-107-675-11	ELECT (KV-EX34M97)	1UF	20.00%	450V
C6681	1-107-675-11	ELECT (KV-EX34M97)	1UF	20.00%	450V
C6800	1-126-964-11	ELECT	10UF	20.00%	50V
C6801	1-126-960-11	ELECT	1UF	20.00%	50V
C6802	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6805	1-111-087-11	ELECT	330UF	20.00%	25V
C6806	1-107-933-11	ELECT	100UF	20.00%	100V
C6808	1-137-401-11	MYLAR	0.22UF	10.00%	100V
C6809	1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C6810	1-106-220-00	MYLAR	0.1UF	10.00%	100V
C6811	1-111-087-11	ELECT	330UF	20.00%	25V
C6813	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C6814	1-125-889-91	CERAMIC CHIP	2.2UF	10%	10V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C6815	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C6816	1-136-060-00	FILM (Except KV-EX34M97)	0.047UF	5.00%	400V
C6816	1-137-577-11	FILM (KV-EX34M97)	0.068UF	5.00%	400V
C6817	1-126-967-11	ELECT	47UF	20.00%	50V
C6818	1-126-960-11	ELECT	1UF	20.00%	50V
C6819	1-126-960-11	ELECT	1UF	20.00%	50V
C6820	1-102-114-00	CERAMIC	470PF	10.00%	50V
C6821	1-106-383-00	MYLAR	0.047UF	10.00%	200V
C6822	1-102-114-00	CERAMIC	470PF	10.00%	50V
C6823	1-106-383-00	MYLAR	0.047UF	10.00%	200V
C6826	1-102-030-00	CERAMIC	330PF	10.00%	500V
C6827	1-102-030-00	CERAMIC	330PF	10.00%	500V
C6828	1-104-987-11	MYLAR (Except KV-EX34M97)	0.001UF	10.00%	200V
C6828	1-107-364-11	MYLAR (KV-EX34M97)	0.01UF	10.00%	200V
C6829	1-162-558-11	CERAMIC (Except KV-EX34M97)	100PF	10.00%	2KV
C6829	1-162-115-00	CERAMIC (KV-EX34M97)	330PF	10.00%	2KV
C6830	1-117-619-11	FILM (KV-EX34M97)	1000PF	3.00%	1.2KV
C6831	1-117-835-11	FILM (Except KV-EX34M97)	6200PF	3.00%	1.5KV
C6831	1-117-838-11	FILM (KV-EX34M97)	8200PF	3.00%	1.5KV
C6832	1-117-836-11	FILM (Except KV-EX34M97)	6800PF	3.00%	1.5KV
C6832	1-117-842-11	FILM (KV-EX34M97)	12000PF	3.00%	1.5KV
C6833	1-127-680-11	FILM MELF	4700PF	2%	100V
C6834	1-125-893-11	FILM	680PF	3.00%	1.5KV
C6835	1-125-893-11	FILM	680PF	3.00%	1.5KV
C6836	1-127-681-11	FILM MELF	10000PF	2%	100V
C6837	1-125-893-11	FILM	680PF	3.00%	1.5KV
C6838	1-125-893-11	FILM	680PF	3.00%	1.5KV
C6839	1-126-933-11	ELECT	100UF	20.00%	16V
C6840	1-126-933-11	ELECT	100UF	20.00%	16V
C6841	1-117-660-21	FILM (Except KV-EX34M97)	0.12UF	5.00%	250V
C6841	1-115-511-11	FILM (KV-EX34M97)	0.12UF	5.00%	250V
C6842	1-117-667-71	FILM (Except KV-EX34M97)	0.47UF	5.00%	250V
C6842	1-117-673-11	FILM (KV-EX34M97)	1.5UF	5.00%	250V
C6843	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6844	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6845	1-115-514-11	FILM (Except KV-EX34M97)	0.22UF	5.00%	250V
C6845	1-117-664-11	FILM (KV-EX34M97)	0.27UF	5.00%	250V
C6846	1-109-945-11	FILM (Except KV-EX34M97)	0.18UF	5.00%	250V
C6846	1-115-514-11	FILM (KV-EX34M97)	0.22UF	5.00%	250V
C6847	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C6848	1-113-979-51	FILM	0.047UF	5%	250V
C6849	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6850	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V
C6851	1-107-639-11	ELECT	47UF	20.00%	160V
C6852	1-102-121-00	CERAMIC (EXCEPT KV-EX29M87)	0.0022UF	10.00%	50V
C6853	1-102-228-00	CERAMIC	470PF	10.00%	500V
C6854	1-126-941-11	ELECT	470UF	20.00%	25V
C6855	1-123-024-21	ELECT	33UF		160V
C6856	1-126-971-11	ELECT	470UF	20.00%	50V
C6857	1-102-228-00	CERAMIC	470PF	10.00%	500V
C6858	1-102-228-00	CERAMIC	470PF	10.00%	500V
C6859	1-162-129-00	CERAMIC	150PF	10.00%	2KV
C6860	1-162-131-11	CERAMIC (Except KV-EX34M97)	220PF	10.00%	2KV
C6860	1-162-129-00	CERAMIC (KV-EX34M97)	150PF	10.00%	2KV
C6862	1-130-202-00	FILM	0.022UF	5.00%	200V
C6863	1-107-906-11	ELECT	10UF	20.00%	50V
C6864	1-129-898-00	FILM	0.0022UF	5.00%	630V
C6865	1-130-202-00	FILM	0.022UF	5.00%	400V
C6866	1-102-030-00	CERAMIC	330PF	10.00%	500V
C6867	1-130-785-11	MYLAR	0.47UF	10.00%	100V
C6868	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6869	1-107-882-91	ELECT (KV-EX34M97)	100UF	20.00%	16V
C6870	1-128-528-11	ELECT (KV-EX34M97)	470UF	20.00%	25V
C6871	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C6872	1-163-275-11	CERAMIC CHIP (KV-EX34M97)	0.001UF	5.00%	50V
C6874	1-136-165-00	FILM (KV-EX34M97)	0.1UF	5.00%	50V
C6874	1-136-365-00	FILM (EXCEPT KV-EX34M97)	0.1UF	5.00%	50V
C6875	1-104-664-11	ELECT	47UF	20.00%	16V
C6876	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C6877	1-126-964-11	ELECT	10UF	20.00%	50V
C6878	1-126-320-11	ELECT	10UF	20.00%	16V
C6879	1-107-960-11	ELECT	4.7UF	20.00%	160V
C6880	1-164-004-11	CERAMIC CHIP (Except KV-EX34M97)	0.1UF	10.00%	25V
C6880	1-163-021-91	CERAMIC CHIP (KV-EX34M97)	0.01UF	10.00%	50V
C6882	1-104-574-11	CERAMIC	0.0047UF	10.00%	2KV
C6883	1-126-965-11	ELECT	22UF	20.00%	50V
C6884	1-125-889-91	CERAMIC CHIP	2.2UF	10%	10V
C6885	1-162-131-11	CERAMIC (Except KV-EX34M97)	220PF	10.00%	2KV

<CONNECTOR>

CN6602*⚠	1-508-786-13	PIN, CONNECTOR (5MM PITCH) 2P
CN6603*⚠	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P
CN6604*	1-580-843-11	PIN, CONNECTOR (POWER)
CN6605*	1-764-333-11	PLUG, CONNECTOR 10P
CN6606*	1-764-333-11	PLUG, CONNECTOR 10P
CN6609*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN6610*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P
CN6611*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P

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REF. NO.	PART NO.	DESCRIPTION	REMARK
CN6612*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6613*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6614*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6615*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6616*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6617	1-695-915-11	TAB (CONTACT)	
CN6618*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6619*	1-564-507-11	PLUG, CONNECTOR 4P	
CN6800*	1-764-333-11	PLUG, CONNECTOR 10P	
CN6801*⚠	1-785-270-12	PIN, DY CONNECTOR (PC BOARD)	
CN6802	1-783-967-11	CONNECTOR, BOARD TO BOARD 30P	
CN6803*	1-764-333-11	PLUG, CONNECTOR 10P	
CN6804⚠	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
		(Except KV-EX34M97)	
CN6805	1-695-915-11	TAB (CONTACT)	
CN6808	1-695-915-11	TAB (CONTACT)	
CN6809	1-695-915-11	TAB (CONTACT)	
CN6810	1-785-879-11	CONNECTOR, ONE TOUCH	
CN6811*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6812*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
CN6819	1-783-967-11	CONNECTOR, BOARD TO BOARD 30P	
		<DIODE>	
D6100	8-719-077-76	DIODE D2SB60A-F04	
D6101	8-719-110-49	DIODE RD18ES-B2	
D6102	8-719-978-65	DIODE DTZ.TT11-15B	
D6103	8-719-073-01	DIODE MA111-(K8).S0	
D6104	8-719-510-48	DIODE D1N20R	
D6105	8-719-948-45	DIODE ERA22-08	
D6108	8-719-063-73	DIODE D1NL20U-TR	
D6323	8-719-032-12	DIODE D1NS6	
D6601	8-719-911-19	DIODE 1SS119-25	
D6602	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX29M87)	
D6603	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX29M87)	
D6604	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX29M87)	
D6605	8-719-510-53	DIODE D4SB60L	
D6608	8-719-073-01	DIODE MA111-(K8).S0	
D6609	8-719-911-19	DIODE ISS119-25 (KV-EX29M87)	
D6610	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX29M87)	
D6611	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX29M87)	
D6612	8-719-911-55	DIODE U05G (KV-EX29M87)	
D6613	8-719-911-55	DIODE U05G (KV-EX29M87)	
D6614	8-719-110-30	DIODE RD12ES-T1B	
D6615	8-719-911-19	DIODE 1SS119-25	
D6618	8-719-979-64	DIODE UF4005PKG23	
D6620	8-719-063-73	DIODE D1NL20U-TR	
D6621	8-719-073-01	DIODE MA111-(K8).S0 (KV-EX34M97)	
D6623	8-719-911-19	DIODE 1SS119-25	
D6631	8-719-050-18	DIODE D4SBL20U	
D6632	8-719-073-01	DIODE MA111-(K8).S0	
D6633	8-719-510-12	DIODE D10SC4M	
D6635	8-719-110-47	DIODE RD18ESB	
D6636	8-719-911-19	DIODE 1SS119-25	
D6639	8-719-063-73	DIODE D1NL20U-TR	
D6640	8-719-110-72	DIODE RD30ES-B2	
D6641	8-719-109-96	DIODE RD6.8ES-B1	
D6642	8-719-911-19	DIODE 1SS119-25	
D6644	8-719-052-92	DIODE D10SBS4F	
D6648	8-719-110-30	DIODE RD12ES-B1 (KV-EX29M87)	
D6653	8-719-911-55	DIODE U05G (KV-EX234M97)	
D6654	8-719-052-92	DIODE D10SBS4F	
D6800	8-719-110-03	DIODE RD7.5ES-B2	
D6801	8-719-911-19	DIODE 1SS119-25	
D6803	8-719-510-73	DIODE S3L20UF4	
D6806	8-719-911-19	DIODE 1SS119-25	
D6807	8-719-109-68	DIODE RD3.6ES-B1	
D6808	8-719-914-43	DIODE DAN202K	
D6809	8-719-908-03	DIODE GP08D	
D6812	8-719-110-39	DIODE RD15ES-B1	
D6813	8-719-302-43	DIODE ELIZ	
D6814	8-719-018-82	DIODE RGP02-20EL-6394	
D6816	8-719-510-73	DIODE S3L20UF4	
D6817	8-719-510-73	DIODE S3L20UF4	
D6820	8-719-970-87	DIODE ERA38-06	
D6821	8-719-970-87	DIODE ERA38-06	
D6822	8-719-067-18	DIODE RN4Z (KV-EX34M97)	
D6823	8-719-911-19	DIODE 1SS119-25	
D6824	8-719-510-73	DIODE S3L20UF4	
D6825	8-719-914-43	DIODE DAN202K	
D6826	8-719-911-19	DIODE 1SS119-25	
D6830	8-719-914-43	DIODE DAN202K	
		<FERRITE BEAD>	
FB6602	1-239-358-21	FILTER, NOISE	
FB6603	1-239-358-21	FILTER, NOISE	
FB6604	1-410-396-41	FERRITE 0.45UH	
FB6605	1-410-396-41	FERRITE 0.45UH	
FB6606	1-410-397-21	FERRITE 1.1UH	
		<IC>	
IC6600	8-759-670-30	IC MCZ3001D	
IC6601	8-759-198-31	IC UPC1093J-1-T	
IC6607	8-749-012-13	IC DM-58	
IC6608	8-759-133-90	IC UPC339C	
IC6800	8-759-192-71	IC STV9379	
IC6801	8-759-450-95	IC LM393N	
IC6804	8-759-394-36	IC BA09T	
IC6805	8-759-394-35	IC BA12T	
IC6806	8-749-013-76	IC PQ6RD83B (KV-EX34M97)	
		<CHIP CONDUCTOR>	
JR6601	1-216-295-11	SHORT 0	
JR6603	1-216-295-11	SHORT 0	
JR6606	1-216-295-11	SHORT 0	
JR6607	1-216-295-11	SHORT 0	
JR6608	1-216-295-11	SHORT 0	
JR6609	1-216-295-11	SHORT 0	
JR6610	1-216-295-11	SHORT 0	
JR6611	1-216-295-11	SHORT 0	

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REF. NO.	PART NO.	DESCRIPTION	REMARK
JR6612	1-216-295-11	SHORT 0	
JR6613	1-216-295-11	SHORT 0	
JR6893	1-216-295-11	SHORT 0	
		<COIL>	
L6600	1-410-396-41	FERRITE 0.45UH	
L6604	1-412-525-31	INDUCTOR 10UH	
L6605	1-412-525-31	INDUCTOR 10UH	
L6606	1-412-525-31	INDUCTOR 10UH	
L6607	1-412-519-11	INDUCTOR 3.3UH	
L6608	1-412-525-31	INDUCTOR 10UH	
L6609	1-410-396-41	FERRITE 0.45UH	
L6800	1-412-525-31	INDUCTOR 10UH	
L6801	1-406-675-11	INDUCTOR 4.7MH (Except KV-EX34M97)	
L6801	1-406-986-21	INDUCTOR 3.3UH (KV-EX34M97)	
L6803	1-406-985-11	INDUCTOR 2.2MH (Except KV-EX34M97)	
L6803	1-406-982-11	INDUCTOR 680UH (KV-EX34M97)	
L6804	1-412-519-11	INDUCTOR 3.3UH	
L6805	1-412-519-11	INDUCTOR 3.3UH	
L6806	1-412-519-11	INDUCTOR 3.3UH	
L6807	1-412-552-11	INDUCTOR 2.2MH	
L6808	1-406-674-11	INDUCTOR 3.3MH	
		<PHOTO COUPLER>	
PH6601	⚠8-749-924-35	PHOTO COUPLER ON3171-R	
PH6602	⚠8-749-924-35	PHOTO COUPLER ON3171-R	
		<IC LINK>	
PS6605	1-533-597-41	LINK, IC	
PS6606	1-533-597-41	LINK, IC	
PS6801	1-532-841-21	LINK, IC	
		<TRANSISTOR>	
Q6100	8-729-046-40	TRANSISTOR 2SK2663	
Q6102	8-729-023-22	TRANSISTOR 2SD2114K	
Q6600	8-729-052-32	TRANSISTOR IRFIB7N50A	
Q6601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6602	8-729-119-78	TRANSISTOR 2SC2785TP-HFE (KV-EX29M87)	
Q6603	8-729-052-32	TRANSISTOR IRFIB7N50A	
Q6604	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q6605	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q6608	8-729-200-21	TRANSISTOR 2SC2500-B	
Q6609	8-729-029-56	TRANSISTOR DTA144ESA	
Q6610	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6611	8-729-029-66	TRANSISTOR DTC114ESA	
Q6613	8-729-030-02	TRANSISTOR DTC144ESA	
Q6614	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q6619	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6800	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q6802	8-729-046-33	TRANSISTOR IRF720-LF49 (Except KV-EX34M97)	
Q6802	8-729-025-19	TRANSISTOR IRFI740G (KV-EX34M97)	
Q6803	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q6804	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q6805	8-729-140-96	TRANSISTOR 2SD774-34	
Q6806	8-729-140-96	TRANSISTOR 2SD774-34	
Q6807	8-729-046-18	TRANSISTOR 2SC5480-01	
Q6808	8-729-046-18	TRANSISTOR 2SC5480-01	
Q6809	8-729-038-83	TRANSISTOR 2SK2251-01-F19	
Q6810	8-729-047-60	TRANSISTOR IRFI830G-LF49	
Q6811	1-801-806-11	TRANSISTOR DTC144EKA	
Q6812	8-729-043-95	TRANSISTOR 2SC3840(3)	
Q6813	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q6814	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q6815	8-729-045-65	TRANSISTOR 2SA1776TV2Q	
Q6816	8-729-140-96	TRANSISTOR 2SD774-34	
Q6817	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q6818	1-801-806-11	TRANSISTOR DTC144EKA	
Q6819	1-801-806-11	TRANSISTOR DTC144EKA	
Q6820	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
Q6821	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q6822	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q6823	8-729-422-33	TRANSISTOR 2SD601A-Q-TX	
		<RESISTOR>	
R6100	1-260-298-51	CARBON 3.3 5% 1/2W	
R6101	1-216-045-00	RES-CHIP 680 5% 1/10W	
R6102	1-249-389-11	CARBON 4.7 5% 1/4W	
R6103	1-216-009-91	RES-CHIP 22 5% 1/10W	
R6104	1-240-205-91	CARBON 22M 5% 1/2W	
R6105	1-216-097-11	RES-CHIP 100K 5% 1/10W	
R6106	1-216-057-00	RES-CHIP 2.2K 5% 1/10W	
R6107	1-216-089-11	RES-CHIP 47K 5% 1/10W	
R6108	1-215-493-00	METAL 1M 1% 1/4W	
R6110	1-249-413-11	CARBON 470 5% 1/4W	
R6500	1-220-797-11	CEMENTED 0.47 5% 10W	
R6600	1-216-295-11	SHORT 0	
R6602	1-249-417-11	CARBON 1K 5% 1/4W	
R6603	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
R6604	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	
R6605	1-215-417-00	METAL (KV-EX29M87) 120K 1% 1/4W	
R6606	1-215-466-00	METAL (KV-EX29M87) 75K 1% 1/4W	
R6607	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6608	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6609	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6610	1-208-830-11	METAL CHIP (KV-EX29M87) 100K 0.5% 1/10W	
R6611	1-208-798-11	METAL CHIP 4.7K 0.5% 1/10W	
R6612	1-215-471-00	METAL (KV-EX29M87) 120K 1% 1/4W	
R6613	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6614	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6615	1-215-489-00	METAL (KV-EX29M87) 680K 1% 1/4W	
R6616	1-208-830-11	METAL CHIP (KV-EX29M87) 100K 0.5% 1/10W	

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R6617	1-208-844-11	METAL CHIP (KV-EX29M87)	390K	0.5%	1/10W
R6618	1-215-466-00	METAL (KV-EX29M87)	75K	1%	1/4W
R6619	1-216-113-00	RES-CHIP (KV-EX29M87)	470K	5%	1/10W
R6620	1-208-846-11	METAL CHIP (KV-EX29M87)	470K	0.5%	1/10W
R6621	1-216-073-00	RES-CHIP (KV-EX29M87)	10K	5%	1/10W
R6622	1-220-797-11	CEMENTED	0.47	5%	10W
R6623	1-215-864-00	METAL OXIDE (KV-EX29M87)	150K	5%	1W
R6624	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6625	1-215-864-00	METAL OXIDE	150	5%	1W
R6626	1-215-444-00	METAL	9.1K	1%	1/4W
R6627	1-215-481-00	METAL	330K	1%	1/4W
R6628	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6629	1-215-481-00	METAL	330K	1%	1/4W
R6630	1-215-481-00	METAL	330K	1%	1/4W
R6631	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6632	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R6633	1-215-458-00	METAL	36K	1%	1/4W
R6634	1-215-489-00	METAL	680K	1%	1/4W
R6635	1-215-489-00	METAL	680K	1%	1/4W
R6636	1-215-489-00	METAL	680K	1%	1/4W
R6637	1-215-463-00	METAL	56K	1%	1/4W
R6638	1-240-876-11	CEMENTED	1	5%	15W
R6639	1-240-876-11	CEMENTED	1	5%	15W
R6640	1-216-081-00	RES-CHIP (KV-EX29M87)	22K	5%	1/10W
R6641	1-260-131-11	CARBON (KV-EX29M87)	470K	5%	1/2W
R6642	1-260-131-11	CARBON (KV-EX29M87)	470K	5%	1/2W
R6643	1-216-081-00	RES-CHIP (KV-EX29M87)	22K	5%	1/10W
R6644	1-249-417-11	CARBON	1K	5%	1/4W
R6645	1-220-886-11	FUSIBLE	0.1	10%	1W
R6647	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R6648	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6649	1-249-425-11	CARBON	4.7K	5%	1/4W
R6651	1-217-157-00	METAL	0.33	10%	5W
R6654	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6655	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6658	1-249-393-11	CARBON	10	5%	1/4W
R6659	1-249-393-11	CARBON	10	5%	1/4W
R6660	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6662	1-249-429-11	CARBON	10K	5%	1/4W
R6663	1-249-429-11	CARBON	10K	5%	1/4W
R6664	1-249-421-11	CARBON	2.2K	5%	1/4W
R6666	1-249-429-11	CARBON	10K	5%	1/4W
R6667	1-249-425-11	CARBON	4.7K	5%	1/4W
R6669	1-249-417-11	CARBON	1K	5%	1/4W
R6670	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6671	1-217-611-00	METAL	0.1	10%	2W
R6672	1-249-421-11	CARBON	2.2K	5%	1/4W
R6674	1-249-418-11	CARBON	1.2K	5%	1/4W
R6675	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R6679	1-249-437-11	CARBON	47K	5%	1/4W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6680	1-216-362-11	METAL OXIDE	0.27	5%	2W
R6681	1-249-429-11	CARBON	10K	5%	1/4W
R6682	1-249-416-11	CARBON	820	5%	1/4W
R6683	1-260-127-11	CARBON	220K	5%	1/2W
R6685	1-249-421-11	CARBON	2.2K	5%	1/4W
R6686 ⚠	1-247-289-11	CARBON	8.2M	5%	1W
R6688	1-249-417-11	CARBON	1K	5%	1/4W
R6689	1-249-389-11	CARBON	4.7	5%	1/4W
R6690	1-249-429-11	CARBON	10K	5%	1/4W
R6691	1-260-131-11	CARBON	470K	5%	1/2W
R6692	1-249-410-11	CARBON	270	5%	1/4W
R6693	1-215-451-00	METAL	18K	1%	1/4W
R6694	1-215-471-00	METAL	120K	1%	1/4W
R6696	1-215-925-11	METAL OXIDE	22K	5%	3W
R6699	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6701	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6702	1-216-689-11	RES-CHIP	39K	5%	1/10W
R6704	1-249-377-11	CARBON	0.47	5%	1/4W
R6710	1-217-158-00	METAL	0.47	10%	5W
R6713	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6714	1-208-822-11	METAL CHIP (KV-EX34M97)	47K	0.5%	1/10W
R6715	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6800	1-249-429-11	CARBON	10K	5%	1/4W
R6801	1-249-429-11	CARBON	10K	5%	1/4W
R6802	1-249-429-11	CARBON	10K	5%	1/4W
R6803	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6804	1-208-796-11	METAL CHIP (Except KV-EX34M97)	3.9K	0.5%	1/10W
R6804	1-208-795-11	METAL CHIP (KV-EX34M97)	3.6K	0.5%	1/10W
R6805	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R6806	1-208-796-11	METAL CHIP (Except KV-EX34M97)	3.9K	0.5%	1/10W
R6806	1-208-795-11	METAL CHIP (KV-EX34M97)	3.6K	0.5%	1/10W
R6807	1-249-383-11	CARBON	1.5	5%	1/4W
R6810	1-214-798-21	METAL	1.8	1%	1/2W
R6811	1-215-913-11	METAL OXIDE	220	5%	3W
R6813	1-214-798-21	METAL	1.8	1%	1/2W
R6814	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6815	1-208-801-11	METAL CHIP	6.2K	0.5%	1/10W
R6816	1-214-915-00	METAL	120K	1%	1/2W
R6818	1-215-485-00	METAL	470K	1%	1/4W
R6819	1-249-421-11	CARBON	2.2K	5%	1/4W
R6820	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6822	1-216-461-00	METAL OXIDE	5.6K	5%	2W
R6823	1-215-895-11	METAL OXIDE	3.3K	5%	2W
R6824	1-249-408-11	CARBON	180	5%	1/4W
R6825	1-249-408-11	CARBON	180	5%	1/4W
R6826	1-216-459-00	METAL OXIDE (Except KV-EX34M97)	2.7K	5%	2W
R6826	1-215-894-11	METAL OXIDE (KV-EX34M97)	2.2K	5%	2W
R6827	1-215-895-11	METAL OXIDE (Except KV-EX34M97)	3.3K	5%	2W
R6827	1-216-459-00	METAL OXIDE (KV-EX34M97)	2.7K	5%	2W
R6828	1-249-411-11	CARBON	330	5%	1/4W

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6829	1-249-411-11	CARBON	330	5%	1/4W
R6830	1-247-764-11	CARBON	10K	5%	1/2W
R6831	1-247-764-11	CARBON	10K	5%	1/2W
R6832	1-215-477-00	METAL	220K	1%	1/4W
R6833	1-215-493-00	METAL	1M	1%	1/4W
R6834	1-216-381-11	METAL OXIDE	0.22	5%	3W
R6835	1-216-381-11	METAL OXIDE	0.22	5%	3W
R6836	1-215-905-11	METAL OXIDE	10	5%	3W
R6837	1-215-905-11	METAL OXIDE	10	5%	3W
R6838	1-215-461-00	METAL	47K	1%	1/4W
R6839	1-249-405-11	CARBON	100	5%	1/4W
R6841	1-216-434-11	METAL OXIDE	1.8K	5%	1W
R6842	1-215-923-00	METAL OXIDE	10K	5%	3W
R6843	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6844	1-247-807-31	CARBON	100	5%	1/4W
R6845	1-208-836-11	METAL CHIP (Except KV-EX34M97)	180K	0.5%	1/10W
R6845	1-208-824-11	METAL CHIP (KV-EX34M97)	56K	0.5%	1/10W
R6846	1-260-127-11	CARBON	220K	5%	1/2W
R6847	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6848	1-216-101-00	RES-CHIP	150K	5%	1/10W
R6851	1-260-288-11	CARBON	0.47	5%	1/2W
R6852	1-216-345-11	METAL OXIDE	0.47	5%	1W
R6853	1-260-288-11	CARBON	0.47	5%	1/2W
R6854	1-215-923-00	METAL OXIDE	10K	5%	3W
R6855	1-214-899-81	METAL (Except KV-EX34M97)	27K	1%	1/2W
R6855	1-214-898-81	METAL (KV-EX34M97)	24K	1%	1/2W
R6856	1-215-923-00	METAL OXIDE	10K	5%	3W
R6857	1-215-923-00	METAL OXIDE	10K	5%	3W
R6858	1-214-899-81	METAL (Except KV-EX34M97)	27K	1%	1/2W
R6858	1-214-898-81	METAL (KV-EX34M97)	24K	1%	1/2W
R6859	1-215-871-11	METAL OXIDE	2.2K	5%	1W
R6860	1-215-923-00	METAL OXIDE	10K	5%	3W
R6861	1-216-295-11	SHORT	0		
R6862	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6863	1-215-894-11	METAL OXIDE	2.2K	5%	2W
R6864	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6865	1-216-103-00	RES-CHIP (Except KV-EX34M97)	180K	5%	1/10W
R6865	1-216-101-00	RES-CHIP (KV-EX34M97)	150K	5%	1/10W
R6866	1-215-433-00	METAL (Except KV-EX34M97)	3.3K	1%	1/4W
R6866	1-215-431-00	METAL (KV-EX34M97)	2.7K	1%	1/4W
R6867	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6868	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6869	1-216-115-00	RES-CHIP (Except KV-EX34M97)	560K	5%	1/10W
R6869	1-216-113-00	RES-CHIP (KV-EX34M97)	470K	5%	1/10W
R6870	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6871	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6872	1-260-125-11	CARBON	150K	5%	1/2W
R6873	1-260-125-11	CARBON	150K	5%	1/2W
R6875	1-249-417-11	CARBON	1K	5%	1/4W
R6876	1-216-391-11	METAL OXIDE (Except KV-EX34M97)	1.5	5%	3W
R6876	1-260-288-11	CARBON (KV-EX34M97)	0.47	5%	1/2W
R6877	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R6878	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R6879	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6880	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
R6881	1-215-453-00	METAL (Except KV-EX34M97)	22K	1%	1/4W
R6881	1-215-447-00	METAL (KV-EX34M97)	12K	1%	1/4W
R6882	1-215-456-00	METAL (Except KV-EX34M97)	30K	1%	1/4W
R6882	1-215-453-00	METAL (KV-EX34M97)	22K	1%	1/4W
R6883	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6884	1-249-441-11	CARBON	100K	5%	1/4W
R6885	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6886	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6887	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6888	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6889	1-260-125-11	CARBON	150K	5%	1/2W
R6890	1-260-125-11	CARBON	150K	5%	1/2W
R6891	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R6892	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6893	1-216-085-00	RES-CHIP	33K	5%	1/10W
R6894	1-260-133-11	CARBON	680K	5%	1/2W
R6895	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6896	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6897	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6899	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6900	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6901	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6902	1-249-441-11	CARBON	100K	5%	1/4W
R6903	1-215-923-00	METAL OXIDE	10K	5%	3W
R6905	1-249-389-11	CARBON	4.7	5%	1/4W
R6906	1-216-079-00	RES-CHIP	18K	5%	1/10W
R6907	1-216-079-00	RES-CHIP	18K	5%	1/10W

<RELAY>

RY6601	⚠	1-755-018-11	RELAY
RY6602	⚠	1-755-357-11	RELAY, AC POWER (KV-EX29M87)
RY6603	⚠	1-755-357-11	RELAY, AC POWER

<TRANSFORMER>

T6100	⚠	1-433-844-11	TRANSFORMER, CONVERTER
T6602	⚠	1-435-690-11	TRANSFORMER, CONVERTER (PIT)
T6800		1-429-741-11	TRANSFORMER, DRIVE
T6801		1-433-934-11	TRANSFORMER, FERRITE (DFT)
T6802		1-433-489-11	TRANSFORMER, FERRITE (HDT)

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D **DH**

REF. NO.	PART NO.	DESCRIPTION	REMARK
T6803 ⚠	1-453-349-11	FBT ASSY (NX-4522//J1I4) (Except KV-EX34M97)	
T6803 ⚠	1-453-326-11	FBT ASSY (NX-4601//J1I4) (KV-EX34M97)	
T6804	1-433-489-11	TRANSFORMER, FERRITE (HDT)	
		<THERMISTOR>	
TH6100	1-803-586-11	THERMISTOR, NTC	
TH6601	1-803-540-11	THERMISTOR	
		<VARISTOR>	
VD6601	1-803-614-11	VARISTOR (KV-EX29M87)	
VD6603	1-803-830-11	VARISTOR (ERZV14D621)	
**********			
*	A-1333-004-A	DH BOARD MOUNTED (EXCEPT KV-EX34M97)	
*	A-1343-965-A	DH BOARD MOUNTED (KV-EX34M97 ONLY)	
		**********	
		<CAPACITOR>	
C3801	1-126-964-11	ELECT (KV-EX34M97) 10UF 20.00% 50V	
C3804	1-102-129-00	CERAMIC (KV-EX34M97) 0.01UF 10.00% 50V	
C3805	1-126-964-11	ELECT (KV-EX34M97) 10UF 20.00% 50V	
C3807	1-102-129-00	CERAMIC (KV-EX34M97) 0.01UF 10.00% 50V	
C3816	1-126-964-11	ELECT (KV-EX34M97) 10UF 20.00% 50V	
C3819	1-126-960-11	ELECT (KV-EX34M97) 1UF 20.00% 50V	
C3822	1-136-165-00	FILM (KV-EX34M97) 0.1UF 5.00% 50V	
C4701	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V	
C4702	1-126-964-11	ELECT 10UF 20.00% 50V	
C4703	1-163-275-11	CERAMIC CHIP 0.001UF 5.00% 50V	
C4704	1-164-004-11	CERAMIC CHIP 0.1UF 10.00% 25V	
		<CONNECTOR>	
CN3802 *	1-564-507-11	PLUG, CONNECTOR 4P	
CN3804 *	1-564-506-11	PLUG, CONNECTOR 3P	
CN4701 *	1-564-507-11	PLUG,CONNECTOR 4P	
		<DIODE>	
D3805	8-719-911-19	DIODE 1SS119-25 (KV-EX34M97)	
		<IC>	
IC3805	8-759-822-38	IC LA6510 (KV-EX34M97)	
IC3807	1-418-597-11	SENSOR UNIT, MAGNETIC (KV-EX34M97)	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSISTOR>	
Q3807	8-729-030-02	TRANSISTOR DTC144ESA (KV-EX34M97)	
Q3808	8-729-030-02	TRANSISTOR DTC144ESA (KV-EX34M97)	
Q3809	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-EX34M97)	
Q3810	8-729-119-76	TRANSISTOR 2SA1175-HFE (KV-EX34M97)	
Q3811	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-EX34M97)	
Q3812	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-EX34M97)	
Q4701	8-729-230-49	2SC2712-YG	
Q4702	8-729-230-49	2SC2712-YG	
Q4703	8-729-216-22	2SA1162-G	
Q4704	8-729-216-22	2SA1162-G	
		<RESISTOR>	
R3802	1-249-417-11	CARBON (KV-EX34M97) 1K 5% 1/4W	
R3803	1-249-417-11	CARBON (KV-EX34M97) 1K 5% 1/4W	
R3804	1-215-444-00	METAL (KV-EX34M97) 9.1K 1% 1/4W	
R3805	1-249-422-11	CARBON (KV-EX34M97) 2.7K 5% 1/4W	
R3807	1-215-413-00	METAL (KV-EX34M97) 470 1% 1/4W	
R3808	1-247-883-00	CARBON (KV-EX34M97) 150K 5% 1/4W	
R3809	1-247-876-11	CARBON (KV-EX34M97) 75K 5% 1/4W	
R3810	1-249-425-11	CARBON (KV-EX34M97) 4.7K 5% 1/4W	
R3814	1-249-411-11	CARBON (KV-EX34M97) 330 5% 1/4W	
R3823	1-249-395-11	CARBON (KV-EX34M97) 15 5% 1/4W	
R3825	1-249-417-11	CARBON (KV-EX34M97) 1K 5% 1/4W	
R3828	1-249-377-11	CARBON (KV-EX34M97) 0.47 5% 1/4W	
R3839	1-249-429-11	CARBON (KV-EX34M97) 10K 5% 1/4W	
R3845	1-249-425-11	CARBON (KV-EX34M97) 4.7K 5% 1/4W	
R3846	1-249-417-11	CARBON (KV-EX34M97) 1K 5% 1/4W	
R3847	1-247-807-31	CARBON (KV-EX34M97) 100 5% 1/4W	
R3848	1-249-417-11	CARBON (KV-EX34M97) 1K 5% 1/4W	
R3849	1-249-377-11	CARBON (KV-EX34M97) 0.47 5% 1/4W	
R3851	1-535-303-00	LEAD, JUMPER 5.0MM (KV-EX34M97)	
R3852	1-249-441-11	CARBON (KV-EX34M97) 100K 5% 1/4W	
R3854	1-249-429-11	CARBON (KV-EX34M97) 10K 5% 1/4W	
R4701	1-216-049-11	RES-CHIP 1K 5% 1/10W	
R4702	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R4703	1-208-818-11	METAL CHIP 33K 0.5% 1/10W	
R4704	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	
R4705	1-208-806-11	METAL CHIP 10K 0.5% 1/10W	

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DH D1

REF. NO.	PART NO.	DESCRIPTION			REMARK
R4706	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R4707	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
**********					
*	A-1343-928-A	D1 BOARD MOUNTED (Except KV-EX34M97)			
*	A-1343-962-A	D1 BOARD MOUNTED (KV-EX34M97)			
		**********			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C4800	1-136-165-00	FILM	0.1UF	5.00% 50V	
C4801	1-136-161-00	FILM	0.047UF	5.00% 50V	
C4802	1-163-275-11	CERAMIC CHIP	0.001UF	5.00% 50V	
C4803	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C4804	1-126-967-11	ELECT	47UF	20.00% 50V	
C4805	1-126-964-11	ELECT	10UF	20.00% 50V	
C4806	1-163-133-00	CERAMIC CHIP	470PF	5.00% 50V	
C4807	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C4808	1-136-165-00	FILM	0.1UF	5.00% 50V	
C4809	1-163-275-11	CERAMIC CHIP	0.001UF	5.00% 50V	
C4810	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C4811	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C4812	1-126-967-11	ELECT	47UF	20.00% 50V	
C4813	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C4814	1-104-664-11	ELECT	47UF	20.00% 25V	
C4816	1-163-227-11	CERAMIC CHIP (Except KV-EX34M97)	10PF	0.50PF 50V	
C4817	1-104-664-11	ELECT	47UF	20.00% 25V	
C4818	1-126-961-11	ELECT (Except KV-EX34M97)	2.2UF	20.00% 50V	
C4818	1-126-964-11	ELECT (KV-EX34M97)	10UF	20.00% 50V	
C4820	1-107-909-11	ELECT	47UF	20.00% 50V	
C4821	1-107-909-11	ELECT	47UF	20.00% 16V	
C4822	1-107-909-11	ELECT	47UF	20.00% 16V	
C4823	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V	
C4824	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C4825	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C4831	1-163-023-00	CERAMIC CHIP	0.015UF	10.00% 50V	
C4833	1-126-964-11	ELECT	10UF	20.00% 50V	
C4834	1-126-933-11	ELECT	100UF	20.00% 16V	
C4835	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C4850	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C6101	1-107-714-11	ELECT	10UF	20.00% 50V	
C6102	1-109-953-11	ELECT	2.2UF	20.00% 50V	
C6103	1-107-714-11	ELECT	10UF	20.00% 50V	
C6104	1-126-965-11	ELECT	22UF	20.00% 50V	
C6105	1-126-933-11	ELECT	100UF	20.00% 16V	
C6106	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C6108	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C6109	1-104-664-11	ELECT	47UF	20.00% 25V	
C6112	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V	
C6113	1-136-347-11	FILM	0.0047UF	5.00% 630V	
C6114	1-104-664-11	ELECT	47UF	20.00% 25V	
C6115	1-163-005-11	CERAMIC CHIP	470PF	10.00% 50V	

REF. NO.	PART NO.	DESCRIPTION			REMARK
C6116	1-163-275-11	CERAMIC CHIP	0.001UF	5.00% 50V	
C6117	1-163-275-11	CERAMIC CHIP	0.001UF	5.00% 50V	
C6118	1-107-909-11	ELECT	47UF	20.00% 16V	
C6120	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C6121	1-126-963-11	ELECT	4.7UF	20.00% 50V	
C6122	1-104-664-11	ELECT	47UF	20.00% 25V	
C6123	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6124	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6125	1-104-664-11	ELECT (KV-EX34M97)	47UF	20.00% 25V	
C6125	1-128-551-11	ELECT (EXCEPT KV-EX34M97)	22UF	20.00% 25V	
C6127	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6128	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6129	1-126-964-11	ELECT	10UF	20.00% 50V	
C6131	1-126-964-11	ELECT	10UF	20.00% 50V	
C6133	1-137-194-81	FILM	0.47UF	5.00% 50V	
C6136	1-129-716-00	FILM	0.015UF	5.00% 630V	
C6138	1-126-968-11	ELECT	100UF	20.00% 50V	
C6139	1-107-902-11	ELECT	1UF	20.00% 50V	
C6140	1-126-960-11	ELECT	1UF	20.00% 50V	
C6201	1-104-664-11	ELECT	47UF	20.00% 25V	
C6202	1-104-664-11	ELECT	47UF	20.00% 25V	
C6203	1-104-664-11	ELECT	47UF	20.00% 25V	
C6204	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6205	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C6206	1-126-964-11	ELECT	10UF	20.00% 50V	
C6207	1-104-664-11	ELECT	47UF	20.00% 25V	
C6208	1-104-664-11	ELECT	47UF	20.00% 25V	
C6209	1-163-133-00	CERAMIC CHIP	470PF	5.00% 50V	
C6210	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C6211	1-126-964-11	ELECT	10UF	20.00% 50V	
C6212	1-164-222-11	CERAMIC CHIP	0.22UF	25V	
C6350	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C6351	1-104-664-11	ELECT	47UF	20.00% 25V	
C6353	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C6354	1-126-964-11	ELECT	10UF	20.00% 50V	
C6355	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
C6356	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C6358	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C6361	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C6362	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00% 50V	
C6365	1-163-809-11	CERAMIC CHIP	0.047UF	10.00% 25V	
C6376	1-104-664-11	ELECT	47UF	20.00% 25V	
C6377	1-104-664-11	ELECT	47UF	20.00% 25V	
C6378	1-115-339-11	CERAMIC CHIP	0.1UF	10.00% 50V	
C6380	1-136-495-11	FILM	0.068UF	5.00% 50V	
C6381	1-126-964-11	ELECT	10UF	20.00% 50V	
C6385	1-104-664-11	ELECT	47UF	20.00% 25V	
C6386	1-104-664-11	ELECT	47UF	20.00% 25V	
C6388	1-126-964-11	ELECT	10UF	20.00% 50V	
C6392	1-104-664-11	ELECT	47UF	20.00% 25V	
C6409	1-126-963-11	ELECT	4.7UF	20.00% 50V	
		<CONNECTOR>			
CN4800	1-695-915-11	TAB (CONTACT)			
CN4801 *	1-564-507-11	PLUG, CONNECTOR 4P			

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REF. NO.	PART NO.	DESCRIPTION	REMARK
CN6100	1-783-966-11	CONNECTOR, BOARD TO BOARD 30P	
CN6103 *	1-564-518-11	PLUG, CONNECTOR 3P	
CN6104 *	1-564-523-11	PLUG, CONNECTOR 8P	
CN6106	1-783-966-11	CONNECTOR, BOARD TO BOARD 30P	
		<DIODE>	
D4800	8-719-914-43	DIODE DAN202K	
D4801	8-719-914-43	DIODE DAN202K	
D4802	8-719-109-81	DIODE RD4.7ES-B2	
D4803	8-719-911-19	DIODE 1SS119-25	
D4804	8-719-911-19	DIODE 1SS119-25	
D4805	8-719-914-43	DIODE DAN202K	
D4808	8-719-914-43	DIODE DAN202K	
D4809	8-719-914-43	DIODE DAN202K	
D4811	1-249-381-11	CARBON 1 5% 1/4W	
D4812	8-719-911-19	DIODE 1SS119-25	
D4813	8-719-109-89	DIODE RD5.6ES-B2	
D4814	8-719-073-01	DIODE MA111-(K8).S0	
D4815	8-719-109-54	DIODE RD2.2ES-B2	
D4816	8-719-911-19	DIODE 1SS119-25	
D6101	8-719-510-02	DIODE D1NS4	
D6102	8-719-510-02	DIODE D1NS4	
D6103	8-719-063-73	DIODE D1NL20U-TR	
D6104	8-719-911-19	DIODE 1SS119-25	
D6105	8-719-109-60	DIODE RD2.7ES-B2	
D6106	8-719-510-02	DIODE D1NS4	
D6107	8-719-109-85	DIODE RD5.1ESB2	
D6108	8-719-911-19	DIODE 1SS119-25	
D6109	8-719-911-19	DIODE 1SS119-25	
D6110	8-719-987-87	DIODE ERA85-009	
D6133	8-719-911-19	DIODE 1SS119-25	
D6134	8-719-911-19	DIODE 1SS119-25	
D6201	8-719-109-88	DIODE RD5.6ES-B1	
D6210	8-719-109-88	DIODE RD5.6ES-B1	
D6350	8-719-914-43	DIODE DAN202K	
D6351	8-719-914-43	DIODE DAN202K	
D6355	8-719-914-43	DIODE DAN202K	
D6404	8-719-914-43	DIODE DAN202K	
		<IC>	
IC4800	8-759-450-95	IC LM393N	
IC4801	8-759-450-95	IC LM393N	
IC4802	8-759-638-79	IC NJM3404AD-W	
IC4803	8-759-135-80	IC LM358C	
IC6101	8-752-053-21	IC CXA1211M-T4	
IC6102	8-759-450-95	IC LM393N	
IC6103	8-759-450-95	IC LM393N	
IC6104	8-759-803-42	IC LA6500-FA	
IC6105	8-759-450-95	IC LM393N	
IC6106	8-759-198-31	IC UPC1093J-1-T	
IC6107	8-759-325-48	IC CA0005AD	
IC6108	8-759-567-08	IC MB88141APF-ER	
IC6201	8-759-183-37	IC CA0007AD	
IC6202	8-759-135-80	IC LM358C	
IC6351	8-759-450-95	IC LM393N	

REF. NO.	PART NO.	DESCRIPTION	REMARK
IC6353	8-759-231-53	IC TA7805S	
IC6354	8-759-325-48	IC CA0005AD	
IC6356	8-759-822-38	IC LA6510	
		<CHIP CONDUCTOR>	
JR6100	1-216-295-11	SHORT 0	
JR6101	1-216-295-11	SHORT 0	
JR6102	1-216-295-11	SHORT 0	
JR6103	1-216-295-11	SHORT 0	
JR6104	1-216-295-11	SHORT 0	
JR6105	1-216-295-11	SHORT 0	
JR6106	1-216-295-11	SHORT 0	
JR6107	1-216-295-11	SHORT 0	
JR6108	1-216-295-11	SHORT 0	
JR6109	1-216-295-11	SHORT 0	
JR6112	1-216-295-11	SHORT 0	
JR6113	1-216-295-11	SHORT 0	
JR6114	1-216-295-11	SHORT 0	
JR6115	1-216-295-11	SHORT 0	
JR6116	1-216-295-11	SHORT 0	
		<COIL>	
L4800	1-412-537-31	INDUCTOR 100UH	
L6101	1-416-920-11	INDUCTOR 10MH	
L6102	1-406-989-21	INDUCTOR 10MH	
		<IC LINK>	
PS6101	1-533-589-31	LINK, IC	
		<TRANSISTOR>	
Q4800	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4801	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4802	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4803	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4804	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4805	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4806	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4807	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4808	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4809	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4810	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4811	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4812	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4813	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4814	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4815	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4816	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4817	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4818	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4820	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q4821	1-801-806-11	TRANSISTOR DTC144EKA	
Q4822	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q6103	8-729-046-33	TRANSISTOR IRF720-LF49	
Q6104	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q6105	8-729-230-49	TRANSISTOR 2SC2712-YG	

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REF. NO.	PART NO.	DESCRIPTION			REMARK
Q6106	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q6107	8-729-140-93	TRANSISTOR 2SB733-34			
Q6108	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q6118	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6124	1-801-806-11	TRANSISTOR DTC144EKA			
Q6125	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6126	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q6128	8-729-023-22	TRANSISTOR 2SD2114K			
Q6201	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6202	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6203	8-729-422-33	TRANSISTOR 2PD601A-Q-TX			
Q6350	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6356	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q6405	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q6455	8-729-230-49	TRANSISTOR 2SC2712-YG			
		<RESISTOR>			
R4408	1-216-025-11	RES-CHIP	100	5%	1/10W
R4409	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4410	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4411	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4412	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4413	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4800	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4801	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4802	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4803	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4804	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R4805	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R4806	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R4807	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4809	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4810	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4811	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4812	1-216-295-11	SHORT	0		
R4813	1-216-089-11	RES-CHIP	47K	5%	1/10W
R4814	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4815	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4816	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4817	1-208-854-11	METAL CHIP	1M	0.5%	1/10W
R4818	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4819	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4820	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4821	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4822	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4823	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4824	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4825	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4826	1-216-049-11	RES-CHIP	1K	5%	1/10W
R4827	1-216-295-11	SHORT	0		
R4828	1-249-415-11	CARBON	680	5%	1/4W
R4829	1-249-415-11	CARBON	680	5%	1/4W
R4831	1-208-798-11	METAL CHIP (Except KV-EX34M97)	4.7K	0.5%	1/10W
R4831	1-216-061-00	RES-CHIP (KV-EX34M97)	3.3K	5%	1/10W
R4832	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4833	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4834	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4835	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4836	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4837	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4838	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4839	1-208-804-11	METAL CHIP (Except KV-EX34M97)	8.2K	0.5%	1/10W
R4839	1-208-802-11	METAL CHIP (KV-EX34M97)	6.8K	0.5%	1/10W
R4840	1-216-295-11	SHORT	0		
R4841	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4842	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4843	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4844	1-208-796-11	METAL CHIP (Except KV-EX34M97)	3.9K	0.5%	1/10W
R4844	1-208-798-11	METAL CHIP (KV-EX34M97)	4.7K	0.5%	1/10W
R4845	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R4846	1-216-295-11	SHORT	0		
R4847	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4848	1-216-073-00	RES-CHIP	10K	5%	1/10W
R4849	1-216-085-00	RES-CHIP (Except KV-EX34M97)	33K	5%	1/10W
R4849	1-216-095-00	RES-CHIP (KV-EX34M97)	82K	5%	1/10W
R4850	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4851	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R4852	1-216-081-00	RES-CHIP	22K	5%	1/10W
R4853	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R4854	1-216-067-00	RES-CHIP (Except KV-EX34M97)	5.6K	5%	1/10W
R4854	1-216-061-00	RES-CHIP (KV-EX34M97)	3.3K	5%	1/10W
R4855	1-216-065-91	RES-CHIP (Except KV-EX34M97)	4.7K	5%	1/10W
R4855	1-216-077-91	RES-CHIP (KV-EX34M97)	15K	5%	1/10W
R4856	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4857	1-208-798-11	METAL CHIP (Except KV-EX34M97)	4.7K	0.5%	1/10W
R4857	1-208-814-91	METAL CHIP (KV-EX34M97)	22K	0.5%	1/10W
R4858	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4859	1-208-804-11	METAL CHIP (Except KV-EX34M97)	8.2K	0.5%	1/10W
R4859	1-208-792-11	METAL CHIP (KV-EX34M97)	2.7K	0.5%	1/10W
R4860	1-208-758-11	METAL CHIP (Except KV-EX34M97)	100	0.5%	1/10W
R4860	1-208-792-11	METAL CHIP (KV-EX34M97)	2.7K	0.5%	1/10W
R4861	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4862	1-208-806-11	METAL CHIP (Except KV-EX34M97)	10K	0.5%	1/10W
R4862	1-208-810-11	METAL CHIP (KV-EX34M97)	15K	0.5%	1/10W
R4864	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R4865	1-208-774-11	METAL CHIP	470	0.5%	1/10W

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R4866	1-216-089-11	RES-CHIP	47K	5%	1/10W
R4868	1-208-841-11	METAL CHIP	300K	0.5%	1/10W
R4869	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4871	1-208-817-11	METAL CHIP	30K	0.5%	1/10W
		(Except KV-EX34M97)			
R4871	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
		(KV-EX34M97)			
R4872	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4874	1-216-295-11	SHORT	0		
R4875	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4877	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R4878	1-208-834-11	METAL CHIP	150K	0.5%	1/10W
		(Except KV-EX34M97)			
R4878	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
		(KV-EX34M97)			
R4879	1-216-105-91	RES-CHIP	220K	5%	1/10W
R4880	1-216-295-11	SHORT	0		
R4881	1-216-295-11	SHORT	0		
R4882	1-208-805-11	METAL CHIP	9.1K	0.5%	1/10W
		(Except KV-EX34M97)			
R4882	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
		(KV-EX34M97)			
R4883	1-208-842-11	METAL CHIP	330K	0.5%	1/10W
R4884	1-216-691-11	METAL CHIP	47K	0.5%	1/10W
R4887	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R4892	1-216-295-11	SHORT	0		
R6101	1-216-025-11	RES-CHIP	100	5%	1/10W
R6103	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6104	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6105	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6106	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6107	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6108	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6109	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6110	1-216-295-11	SHORT	0		
R6112	1-208-826-11	METAL CHIP	68K	0.5%	1/10W
		(Except KV-EX34M97)			
R6112	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
		(KV-EX34M97)			
R6113	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6114	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6115	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R6116	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6117	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6118	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6119	1-208-796-11	METAL CHIP	3.9K	0.5%	1/10W
R6120	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6121	1-216-490-11	METAL OXIDE	39K	5%	3W
R6122	1-216-295-11	SHORT	0		
R6123	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6124	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R6125	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6126	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6127	1-208-832-11	METAL CHIP	120K	0.5%	1/10W
R6128	1-208-838-91	METAL CHIP	220K	0.5%	1/10W
R6129	1-216-353-00	METAL OXIDE	2.2	5%	1W
R6130	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6131	1-208-816-11	METAL CHIP	27K	0.5%	1/10W
		(Except KV-EX34M97)			

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6131	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
		(KV-EX34M97)			
R6133	1-208-812-11	METAL CHIP	18K	0.5%	1/10W
R6134	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W
R6135	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6136	1-260-099-11	CARBON	1K	5%	1/2W
R6137	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6138	1-208-798-11	METAL CHIP	4.7K	0.5%	1/10W
R6139	1-208-803-11	METAL CHIP	7.5K	0.5%	1/10W
		(Except KV-EX34M97)			
R6139	1-208-797-11	METAL CHIP	4.3K	0.5%	1/10W
		(KV-EX34M97)			
R6140	1-216-077-91	RES-CHIP	15K	5%	1/10W
R6141	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6142	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6143	1-208-792-11	METAL CHIP	2.7K	0.5%	1/10W
R6144	1-208-840-11	METAL CHIP	270K	0.5%	1/10W
		(Except KV-EX34M97)			
R6144	1-208-832-11	METAL CHIP	120K	0.5%	1/10W
		(KV-EX34M97)			
R6149	1-208-828-11	METAL CHIP	82K	0.5%	1/10W
R6150	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6151	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6152	1-216-081-00	RES-CHIP	22K	5%	1/10W
R6153	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6154	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
		(Except KV-EX34M97)			
R6154	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
		(KV-EX34M97)			
R6155	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6156	1-216-077-91	RES-CHIP	15K	5%	1/10W
R6157	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6158	1-216-689-11	RES-CHIP	39K	5%	1/10W
R6159	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
		(Except KV-EX34M97)			
R6159	1-208-802-11	METAL CHIP	6.8K	0.5%	1/10W
		(KV-EX34M97)			
R6161	1-208-814-91	METAL CHIP	22K	0.5%	1/10W
R6162	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6168	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6169	1-208-776-11	METAL CHIP	560	0.5%	1/10W
R6170	1-216-037-00	RES-CHIP	330	5%	1/10W
R6171	1-216-113-00	RES-CHIP	470K	5%	1/10W
R6172	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6173	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6174	1-216-079-00	RES-CHIP	18K	5%	1/10W
R6175	1-208-816-11	METAL CHIP	27K	0.5%	1/10W
R6176	1-249-389-11	CARBON	4.7	5%	1/4W
R6177	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6178	1-249-389-11	CARBON	4.7	5%	1/4W
R6179	1-216-101-00	RES-CHIP	150K	5%	1/10W
R6180	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6181	1-216-105-91	RES-CHIP	220K	5%	1/10W
R6190	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6192	1-216-295-11	SHORT	0		
R6195	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
		(Except KV-EX34M97)			
R6195	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
		(KV-EX34M97)			

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D1 F1

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R6196	1-249-377-11	CARBON	0.47	5%	1/4W
R6197	1-216-295-11	SHORT	0 (KV-EX34M97)		
R6200	1-208-827-11	METAL CHIP (Except KV-EX34M97)	75K	0.5%	1/10W
R6200	1-208-836-11	METAL CHIP (KV-EX34M97)	180K	0.5%	1/10W
R6201	1-247-750-11	CARBON	680	5%	1/2W
R6202	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R6203	1-215-906-11	METAL OXIDE	15	5%	3W
R6204	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6206	1-216-033-00	RES-CHIP	220	5%	1/10W
R6207	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R6208	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6209	1-216-099-00	RES-CHIP	120K	5%	1/10W
R6210	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6211	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6212	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6213	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6215	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R6216	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R6217	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6218	1-208-836-11	METAL CHIP	180K	0.5%	1/10W
R6219	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R6220	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6221	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R6222	1-216-295-11	SHORT	0		
R6223	1-216-295-11	SHORT	0		
R6224	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
R6225	1-208-824-11	METAL CHIP	56K	0.5%	1/10W
R6226	1-216-033-00	RES-CHIP	220	5%	1/10W
R6227	1-216-033-00	RES-CHIP	220	5%	1/10W
R6324	1-216-017-91	RES-CHIP	47	5%	1/10W
R6325	1-216-017-91	RES-CHIP	47	5%	1/10W
R6326	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6327	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R6350	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R6357	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6359	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6360	1-216-073-00	RES-CHIP	10K	5%	1/10W
R6361	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6367	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6368	1-208-810-11	METAL CHIP	15K	0.5%	1/10W
R6375	1-216-041-00	RES-CHIP	470	5%	1/10W
R6378	1-215-473-00	METAL	150K	1%	1/4W
R6379	1-216-295-11	SHORT	0		
R6382	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6385	1-216-295-11	SHORT	0		
R6386	1-208-830-11	METAL CHIP	100K	0.5%	1/10W
R6391	1-216-049-11	RES-CHIP	1K	5%	1/10W
R6394	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R6413	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R6416	1-208-808-11	METAL CHIP	12K	0.5%	1/10W
R6418	1-216-113-00	RES-CHIP	470K	5%	1/10W
R6419	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6420	1-216-111-00	RES-CHIP	390K	5%	1/10W
R6433	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6438	1-215-437-00	METAL	4.7K	1%	1/4W
R6442	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R6456	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6457	1-208-814-91	METAL CHIP (Except KV-EX34M97)	22K	0.5%	1/10W
R6457	1-208-820-11	METAL CHIP (KV-EX34M97)	39K	0.5%	1/10W
R6458	1-216-089-11	RES-CHIP	47K	5%	1/10W
R6459	1-216-057-00	RES-CHIP	2.2K	5%	1/10W

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* A-1241-448-A F1 BOARD MOUNTED (KV-EX34M97 ONLY)
* A-1241-437-A F1 BOARD MOUNTED (EXCEPT KV-EX34M97)
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1-533-223-11 HOLDER, FUSE
* 4-374-846-01 COVER, CAPACITOR, CAP TYPE

<CAPACITOR>

C1601 ⚠	1-104-708-51	MYLAR	0.47UF	20.00%	250V
C1602 ⚠	1-109-835-51	MYLAR	0.68UF	20.00%	250V
C1603 ⚠	1-117-703-51	CERAMIC	0.0047UF	99%	250V

<CONNECTOR>

CN1601* ⚠	1-580-843-11	PIN, CONNECTOR (POWER)
CN1602* ⚠	1-580-843-11	PIN, CONNECTOR (POWER)
CN1604	1-695-915-11	TAB (CONTACT)

<FUSE>

F1601 ⚠	1-532-299-11	FUSE, TIME-LAG	5A/250V (EXCEPT KV-EX34M97)
F1601 ⚠	1-532-325-11	FUSE, TIME-LAG	6.3A/250V (KV-EX34M97 ONLY)

<FERRITE BEAD>

FB1601	1-410-397-21	FERRITE	1.1UH
FB1602	1-410-397-21	FERRITE	1.1UH
FB1603	1-410-397-21	FERRITE	1.1UH
FB1604	1-410-397-21	FERRITE	1.1UH

<RESISTOR>

R1601 ⚠	1-202-885-91	SOLID	1M	10%	1/2W

<TRANSFORMER>

T1601 ⚠	1-433-900-11	TRANSFORMER, LINE FILTER
T1602 ⚠	1-433-900-11	TRANSFORMER, LINE FILTER

<VARISTOR>

VDR161	1-803-830-11	VARISTOR (ERZV14D621)

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H1 J

REF. NO.	PART NO.	DESCRIPTION			REMARK
*	A-1372-869-A	H1 BOARD MOUNTED			
		**********			
*	4-055-304-01	HOLDER, LED			
		<CAPACITOR>			
C1910	1-104-664-11	ELECT	47UF	20.00% 16V	
C1911	1-104-664-11	ELECT	47UF	20.00% 16V	
C1912	1-102-824-00	CERAMIC	470PF	5.00% 50V	
C1930	1-136-153-00	FILM	0.01UF	5.00% 50V	
C1932	1-136-153-00	FILM	0.01UF	5.00% 50V	
C1935	1-102-824-00	CERAMIC	470PF	5.00% 50V	
C1938	1-102-824-00	CERAMIC	470PF	5.00% 50V	
		<CONNECTOR>			
CN1651 *	1-580-844-11	PIN, CONNECTOR (POWER)			
CN1652 *	1-580-844-11	PIN, CONNECTOR (POWER)			
CN1905 *	1-764-333-11	PLUG, CONNECTOR 10P			
CN1932 *	1-564-509-11	PLUG, CONNECTOR 6P			
CN1934 *	1-764-333-11	PLUG, CONNECTOR 10P			
		<DIODE>			
D1905	8-719-070-16	DIODE NNCD9.1A-T1			
D1906	8-719-045-19	DIODE SPB-26MVWF			
D1907	8-719-070-16	DIODE NNCD9.1A-T1			
D1930	8-719-929-15	DIODE HZS9.1NB2			
D1944	8-719-070-16	DIODE NNCD9.1A-T1			
D1945	8-719-911-19	DIODE 1SS119-25			
D1946	8-719-911-19	DIODE 1SS119-25			
		<IC>			
IC1901	8-742-134-00	HYB IC SBX1981-51P			
		<JACK>			
J1931	1-770-786-11	JACK			
J1932	1-784-646-11	TERMINAL, S			
J1933	1-770-329-11	JACK, PIN 3P			
		<COIL>			
L1931	1-408-603-31	INDUCTOR	10UH		
L1932	1-408-603-31	INDUCTOR	10UH		
		<TRANSISTOR>			
Q1901	8-729-030-02	TRANSISTOR DTC144ESA			
Q1902	8-729-030-02	TRANSISTOR DTC144ESA			
		<RESISTOR>			
R1911	1-249-411-11	CARBON	330	5% 1/4W	
R1913	1-249-429-11	CARBON	10K	5% 1/4W	
R1914	1-249-411-11	CARBON	330	5% 1/4W	
R1915	1-249-429-11	CARBON	10K	5% 1/4W	
R1916	1-249-401-11	CARBON	47	5% 1/4W	
R1917	1-247-807-31	CARBON	100	5% 1/4W	
R1920	1-247-807-31	CARBON	100	5% 1/4W	
R1921	1-247-807-31	CARBON	100	5% 1/4W	
R1933	1-247-895-91	CARBON	470K	5% 1/4W	
R1934	1-247-807-31	CARBON	100	5% 1/4W	
R1935	1-247-807-31	CARBON	100	5% 1/4W	
R1936	1-247-895-91	CARBON	470K	5% 1/4W	
R1952	1-249-421-11	CARBON	2.2K	5% 1/4W	
R1970	1-249-426-11	CARBON	5.6K	5% 1/4W	
R1971	1-249-413-11	CARBON	470	5% 1/4W	
R1972	1-249-417-11	CARBON	1K	5% 1/4W	
R1973	1-249-420-11	CARBON	1.8K	5% 1/4W	
R1974	1-247-843-11	CARBON	3.3K	5% 1/4W	
		<SWITCH>			
S1651	⚠ 1-571-433-31	SWITCH, PUSH (AC POWER)			
S1972	1-692-431-21	SWITCH, TACTILE			
S1973	1-692-431-21	SWITCH, TACTILE			
S1974	1-692-431-21	SWITCH, TACTILE			
S1975	1-692-431-21	SWITCH, TACTILE			
S1976	1-692-431-21	SWITCH, TACTILE			
S1977	1-692-431-21	SWITCH, TACTILE			
S1978	1-692-431-21	SWITCH, TACTILE			

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*	A-1388-286-A	J BOARD MOUNTED			
		**********			
		<CAPACITOR>			
C2410	1-126-967-11	ELECT	47UF	20.00% 50V	
C2411	1-126-967-11	ELECT	47UF	20.00% 50V	
C2412	1-126-967-11	ELECT	47UF	20.00% 50V	
C2413	1-102-112-00	CERAMIC	330PF	10.00% 50V	
C2414	1-102-112-00	CERAMIC	330PF	10.00% 50V	
C2418	1-126-960-11	ELECT	1UF	20.00% 50V	
C2419	1-126-960-11	ELECT	1UF	20.00% 50V	
		<CONNECTOR>			
CN2410 *	1-564-523-11	PLUG, CONNECTOR 8P			
CN3451 *	1-564-519-11	PLUG, CONNECTOR 4P			
		<DIODE>			
D2410	8-719-929-15	DIODE HZS9.1NB2			
D2411	8-719-929-15	DIODE HZS9.1NB2			
D2412	8-719-929-15	DIODE HZS9.1NB2			
D2414	8-719-929-15	DIODE HZS9.1NB2			
D2415	8-719-929-15	DIODE HZS9.1NB2			
D3453	8-719-110-72	DIODE RD30ES-B2			
D3454	8-719-110-72	DIODE RD30ES-B2			

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J

P (KV-EX29M39/EX29M87/EX34M97)

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<JACK>			
J2410	1-784-623-11	BLOCK, PIN JACK 5P			
J3451	1-694-467-11	TERMINAL, PUSH (2P)			
		<RESISTOR>			
R2410	1-247-804-11	CARBON	75	5% 1/4W	
R2411	1-247-804-11	CARBON	75	5% 1/4W	
R2412	1-247-804-11	CARBON	75	5% 1/4W	
R2414	1-247-887-00	CARBON	220K	5% 1/4W	
R2415	1-247-807-31	CARBON	100	5% 1/4W	
R2417	1-247-887-00	CARBON	220K	5% 1/4W	
R2418	1-247-807-31	CARBON	100	5% 1/4W	
R2419	1-249-409-11	CARBON	220	5% 1/4W	
R2420	1-249-409-11	CARBON	220	5% 1/4W	
R2421	1-249-409-11	CARBON	220	5% 1/4W	
**********					
*	A-1195-161-A	P BOARD COMPLETE (Except KV-EX29M93/			
	**********	********** EX29M65)			
		<CAPACITOR>			
C8801	1-104-665-11	ELECT	100UF	20.00% 10V	
C8802	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8803	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V	
C8804	1-163-227-11	CERAMIC CHIP	10PF	0.50PF 50V	
C8805	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8806	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8807	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8808	1-126-967-11	ELECT	47UF	20.00% 50V	
C8809	1-126-967-11	ELECT	47UF	20.00% 50V	
C8810	1-104-665-11	ELECT	100UF	20.00% 10V	
C8811	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8812	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8813	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8814	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8815	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8816	1-104-665-11	ELECT	100UF	20.00% 10V	
C8817	1-104-665-11	ELECT	100UF	20.00% 10V	
C8818	1-104-665-11	ELECT	100UF	20.00% 10V	
C8819	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8820	1-104-665-11	ELECT	100UF	20.00% 10V	
C8821	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8822	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8823	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8824	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C8825	1-117-720-11	CERAMIC CHIP	4.7UF	10V	
C8826	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8827	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8828	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8829	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8830	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8831	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8832	1-163-249-11	CERAMIC CHIP	82PF	5.00% 50V	
C8834	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C8835	1-163-251-11	CERAMIC CHIP	100PF	5.00% 50V	
		<CONNECTOR>			
CN8801	1-793-496-11	CONNECTOR, BOARD TO BOARD 20P			
		<DIODE>			
D8801	8-719-073-01	DIODE MA111-(K8).S0			
		<FILTER>			
FL8802	1-236-071-11	ENCAPSULATED COMPONENT			
FL8803	1-236-071-11	ENCAPSULATED COMPONENT			
FL8804	1-236-071-11	ENCAPSULATED COMPONENT			
FL8805	1-236-071-11	ENCAPSULATED COMPONENT			
FL8808	1-236-071-11	ENCAPSULATED COMPONENT			
		<IC>			
IC8801	8-759-658-34	IC SDA9588X			
IC8802	8-759-460-72	IC BA033FP-E2			
		<COIL>			
L8801	1-408-603-31	INDUCTOR	10UH		
L8806	1-412-537-31	INDUCTOR	100UH		
L8807	1-408-603-31	INDUCTOR	10UH		
L8809	1-408-412-00	INDUCTOR	18UH		
		<TRANSISTOR>			
Q8801	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8802	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8803	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8804	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q8805	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
Q8806	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q8807	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q8808	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8809	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8810	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8811	8-729-216-22	TRANSISTOR 2SA1162-G			
Q8812	8-729-230-49	TRANSISTOR 2SC2712-YG			
		<RESISTOR>			
R8801	1-216-089-11	RES-CHIP	47K	5% 1/10W	
R8802	1-216-089-11	RES-CHIP	47K	5% 1/10W	
R8803	1-216-025-11	RES-CHIP	100	5% 1/10W	
R8804	1-216-025-11	RES-CHIP	100	5% 1/10W	
R8805	1-216-295-11	SHORT	0		
R8806	1-216-041-00	RES-CHIP	470	5% 1/10W	
R8807	1-216-041-00	RES-CHIP	470	5% 1/10W	

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P (KV-EX29M39/EX29M87/EX34M97)

REF. NO.	PART NO.	DESCRIPTION			REMARK
R8808	1-216-041-00	RES-CHIP	470	5%	1/10W
R8809	1-216-025-11	RES-CHIP	100	5%	1/10W
R8810	1-216-025-11	RES-CHIP	100	5%	1/10W
R8811	1-208-770-11	METAL CHIP	330	0.5%	1/10W
R8812	1-216-025-11	RES-CHIP	100	5%	1/10W
R8815	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8816	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8817	1-216-041-00	RES-CHIP	470	5%	1/10W
R8818	1-216-025-11	RES-CHIP	100	5%	1/10W
R8819	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8820	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8821	1-216-025-11	RES-CHIP	100	5%	1/10W
R8822	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8823	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8824	1-216-025-11	RES-CHIP	100	5%	1/10W
R8825	1-216-041-00	RES-CHIP	470	5%	1/10W
R8826	1-216-025-11	RES-CHIP	100	5%	1/10W
R8827	1-216-025-11	RES-CHIP	100	5%	1/10W
R8828	1-216-025-11	RES-CHIP	100	5%	1/10W
R8829	1-216-025-11	RES-CHIP	100	5%	1/10W
R8830	1-216-025-11	RES-CHIP	100	5%	1/10W
R8831	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8832	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8833	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8834	1-216-089-11	RES-CHIP	47K	5%	1/10W
R8835	1-216-047-91	RES-CHIP	820	5%	1/10W
R8836	1-216-047-91	RES-CHIP	820	5%	1/10W
R8837	1-216-025-11	RES-CHIP	100	5%	1/10W
R8838	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R8839	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R8840	1-216-025-11	RES-CHIP	100	5%	1/10W
R8841	1-216-025-11	RES-CHIP	100	5%	1/10W
R8842	1-216-097-11	RES-CHIP	100K	5%	1/10W
R8843	1-216-041-00	RES-CHIP	470	5%	1/10W
R8844	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8845	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8846	1-216-041-00	RES-CHIP	470	5%	1/10W
R8847	1-216-121-11	RES-CHIP	1M	5%	1/10W
R8848	1-216-073-00	RES-CHIP	10K	5%	1/10W
R8849	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8850	1-216-051-00	RES-CHIP	1.2K	5%	1/10W
		<CRYSTAL>			
X8801	1-781-946-21	VIBRATOR, CRYSTAL			

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* A-1347-165-A V2 BOARD COMPLETE (KV-EX29M39/
********** EX29M65 ONLY)

<CAPACITOR>

C5801	1-104-664-11	ELECT	47UF	20.00%	16V
C5805	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C5806	1-163-038-11	CERAMIC CHIP	0.1UF		25V

V2 (KV-EX29M39/EX29M65)

REF. NO.	PART NO.	DESCRIPTION			REMARK
C5814	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C5815	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C5816	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C5817	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C5818	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C5820	1-163-239-11	CERAMIC CHIP	33PF	5.00%	50V
C5821	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C5822	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C5823	1-126-933-11	ELECT	100UF	20.00%	16V
C5826	1-126-963-11	ELECT	4.7UF	20.00%	50V
C5830	1-163-038-11	CERAMIC CHIP	0.1UF		25V
C5831	1-126-924-11	ELECT	330UF	20.00%	6.3V
		<CONNECTOR>			
CN5801	1-793-496-11	CONNECTOR, BOARD TO BOARD 20P			
		<DIODE>			
D5802	8-719-914-44	DIODE DAP202K			
D5803	8-719-105-46	DIODE RD3.3M-B2			
		<FERRITE BEAD>			
FB5801	1-410-397-21	FERRITE	1.1UH		
FB5802	1-410-397-21	FERRITE	1.1UH		
FB5803	1-410-397-21	FERRITE	1.1UH		
FB5804	1-410-682-31	INDUCTOR	470UH		
		<IC>			
IC5801	8-759-476-87	IC SAA5261			
		<CHIP CONDUCTOR>			
JR5801	1-216-295-11	SHORT	0		
JR5804	1-216-295-11	SHORT	0		
JR5805	1-216-295-11	SHORT	0		
		<COIL>			
L5800	1-412-537-31	INDUCTOR	100UH		
		<TRANSISTOR>			
Q5801	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5803	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5806	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5807	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5808	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5810	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5817	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR			
		<RESISTOR>			
R5800	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R5801	1-216-295-11	SHORT	0		
R5802	1-216-025-11	RES-CHIP	100	5%	1/10W

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

V2 (KV-EX29M39/EX29M65) VM

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5803	1-216-295-11	SHORT	0		
R5821	1-216-083-00	RES-CHIP	27K	5%	1/10W
R5822	1-216-025-11	RES-CHIP	100	5%	1/10W
R5824	1-216-295-11	SHORT	0		
R5825	1-216-295-11	SHORT	0		
R5827	1-216-295-11	SHORT	0		
R5828	1-216-025-11	RES-CHIP	100	5%	1/10W
R5829	1-216-025-11	RES-CHIP	100	5%	1/10W
R5830	1-216-295-11	SHORT	0		
R5831	1-216-295-11	SHORT	0		
R5832	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R5835	1-216-295-11	SHORT	0		
R5839	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R5841	1-216-025-11	RES-CHIP	100	5%	1/10W
R5842	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5843	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5845	1-216-017-91	RES-CHIP	47	5%	1/10W
R5846	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5847	1-216-037-00	RES-CHIP	330	5%	1/10W
R5848	1-216-027-00	RES-CHIP	120	5%	1/10W
R5849	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5857	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5860	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5861	1-216-025-11	RES-CHIP	100	5%	1/10W
R5863	1-216-025-11	RES-CHIP	100	5%	1/10W
R5879	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5880	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5882	1-216-025-11	RES-CHIP	100	5%	1/10W
R5884	1-216-025-11	RES-CHIP	100	5%	1/10W
R5885	1-216-025-11	RES-CHIP	100	5%	1/10W
R5886	1-216-041-00	RES-CHIP	470	5%	1/10W
R5887	1-216-027-00	RES-CHIP	120	5%	1/10W
R5888	1-216-037-00	RES-CHIP	330	5%	1/10W
R5889	1-216-037-00	RES-CHIP	330	5%	1/10W
R5890	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5891	1-216-049-11	RES-CHIP	1K	5%	1/10W
R5893	1-216-027-00	RES-CHIP	120	5%	1/10W
		<CRYSTAL>			
X5801	1-578-774-11	VIBRATOR, CRYSTAL			

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*	A-1342-570-A	VM BOARD MOUNTED	
		**********	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CAPACITOR>	
C5401	1-126-935-11	ELECT	470UF 20.00% 16V
C5402	1-137-194-81	FILM	0.47UF 5.00% 50V
C5403	1-126-935-11	ELECT	470UF 20.00% 6.3V
C5405	1-126-933-11	ELECT	100UF 20.00% 16V
C5406	1-126-935-11	ELECT	470UF 20.00% 6.3V
C5407	1-107-364-11	MYLAR	0.01UF 10.00% 200V
C5408	1-107-364-11	MYLAR	0.01UF 10.00% 200V
C5409	1-107-649-11	ELECT	2.2UF 20.00% 250V
C5410	1-130-471-00	MYLAR	0.001UF 5.00% 50V
C5411	1-130-471-00	MYLAR	0.001UF 5.00% 50V
C5412	1-126-935-11	ELECT	470UF 20.00% 16V
C5413	1-107-648-91	ELECT	100UF 20.00% 160V
C5415	1-104-999-11	MYLAR	0.1UF 10.00% 200V
C5417	1-101-821-00	CERAMIC	0.0022UF 500V
C5418	1-107-638-11	ELECT	33UF 20.00% 160V
		<CONNECTOR>	
CN5401 *	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P	
CN5402	1-764-334-11	PLUG, CONNECTOR 11P	
		<DIODE>	
D5400	8-719-911-19	DIODE 1SS119-25	
D5401	8-719-510-02	DIODE D1NS4	
D5402	8-719-911-19	DIODE 1SS119-25	
D5403	8-719-911-19	DIODE 1SS119-25	
D5404	8-719-911-19	DIODE 1SS119-25	
D5405	8-719-110-56	DIODE RD22ES-B1	
D5406	8-719-110-56	DIODE RD22ES-B1	
		<COIL>	
L5400	1-412-525-31	INDUCTOR	10UH
		<TRANSISTOR>	
Q5400	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5402	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5403	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5404	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q5405	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q5406	8-729-045-05	TRANSISTOR 2SA2005	
Q5407	8-729-045-04	TRANSISTOR 2SC5511	
		<RESISTOR>	
R5401	1-249-425-11	CARBON	4.7K 5% 1/4W
R5402	1-249-415-11	CARBON	680 5% 1/4W
R5403	1-247-739-11	CARBON	100 5% 1/2W
R5404	1-249-418-11	CARBON	1.2K 5% 1/4W
R5406	1-249-425-11	CARBON	4.7K 5% 1/4W
R5407	1-249-401-11	CARBON	47 5% 1/4W
R5408	1-247-807-31	CARBON	100 5% 1/4W
R5409	1-249-409-11	CARBON	220 5% 1/4W
R5410	1-249-401-11	CARBON	47 5% 1/4W
R5411	1-249-401-11	CARBON	47 5% 1/4W
R5412	1-249-429-11	CARBON	10K 5% 1/4W
R5413	1-249-414-11	CARBON	560 5% 1/4W
R5414	1-249-432-11	CARBON	18K 5% 1/4W
R5415	1-247-739-11	CARBON	100 5% 1/2W
R5416	1-249-385-11	CARBON	2.2 5% 1/4W

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VM

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R5417	1-249-432-11	CARBON	18K	5%	1/4W
R5418	1-249-414-11	CARBON	560	5%	1/4W
R5419	1-249-421-11	CARBON	2.2K	5%	1/4W
R5420	1-249-421-11	CARBON	2.2K	5%	1/4W
R5421	1-249-385-11	CARBON	2.2	5%	1/4W
R5422	1-249-405-11	CARBON	100	5%	1/4W
R5423	1-215-915-11	METAL OXIDE	470	5%	3W
R5424	1-249-395-11	CARBON	15	5%	1/4W
R5425	1-249-401-11	CARBON	47	5%	1/4W
R5427	1-249-395-11	CARBON	15	5%	1/4W

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MISCELLANEOUS
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⚠	1-419-323-21	COIL, DEGAUSSING (KV-EX29M39/M65/M93)
⚠	1-419-294-11	COIL, DEGAUSSING (KV-EX29M87)
⚠	1-419-293-11	COIL, DEGAUSSING (KV-EX34M97)
	1-416-891-11	COIL, LANDING CORRECTION (KV-EX34M97)
	1-452-094-00	CIRCULAR DISC MAGNET B
	1-452-032-00	MAGNET,DISC
	1-452-896-11	COIL, NA ROTATION (RT200)
	1-503-902-41	SPEAKER (15X6.5CM)
	1-529-839-11	SPEAKER (16CM)
	1-529-190-11	SPEAKER (5CM)
	1-251-658-21	SPLITTER RF (Except KV-EX29M93/EX29M65)
*	1-555-110-00	P-P CABLE (Except KV-EX29M93/EX29M65)
⚠	1-792-035-11	CORD, POWER (WITH FILTER) (KV-EX29M39)
⚠	1-792-002-11	CORD, POWER (WITH FILTER)
		(KV-EX29M93/EX29M97)
⚠	1-574-062-52	CORD, POWER (WITH CONNECTOR) 2.5A/250V
		(KV-EX29M65 ONLY)
⚠	1-574-062-22	CORD, POWER (WITH CONNECTOR)
		(KV-EX29M87 ONLY)
⚠	8-735-056-05	PICTURE TUBE (M68LNH070X)
		(KV-EX29M93/EX29M65/EX29M39)
⚠	8-735-057-05	PICTURE TUBE (M68LNH070X)
		(KV-EX29M87)
⚠	8-735-062-05	PICTURE TUBE (A80LPD10X)
		(KV-EX34M97)
⚠	8-451-504-61	DEFLECTION YOKE (Y29RSC-S2)
		(EXCEPT KV-EX34M97)
⚠	8-451-500-31	DEFLECTION YOKE (Y34RSC-M3)
		(KV-EX34M97)
	8-453-011-11	NA299-M (Except KV-EX34M97)
	8-453-007-31	NA324-M3 (KV-EX34M97)

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ACCESSORIES AND PACKING MATERIALS
****

	1-569-008-21	ADAPTOR, CONVERSION 2P
		(KV-EX29M87 ONLY)
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
*	4-029-168-01	BAG, PROTECTION (Except KV-EX34M97)
*	4-074-148-01	BAG, PROTECTION (KV-EX34M97)
*	4-076-402-01	CUSHION (LOWER)(ASSY) (Except KV-EX34M97)
*	4-076-924-01	CUSHION (LOWER)(ASSY) (KV-EX34M97)
*	4-076-405-01	CUSHION (UPPER)(ASSY) (Except KV-EX34M97)
*	4-076-927-01	CUSHION (UPPER)(ASSY) (KV-EX34M97)
*	4-076-408-02	INDIVIDUAL CARTON (Except KV-EX34M97)
*	4-076-930-01	INDIVIDUAL CARTON (KV-EX34M97)
	4-078-366-31	MANUAL INSTRUCTION
		(KV-EX29M39/EX29M87)
	4-078-366-51	MANUAL INSTRUCTION (KV-EX29M87 ONLY)
	4-078-366-41	MANUAL INSTRUCTION (KV-EX29M65)
	4-078-366-21	MANUAL INSTRUCTION (KV-EX29M93)
	4-078-366-11	MANUAL INSTRUCTION (KV-EX34M97)
*	4-076-409-01	TRAY (Except KV-EX34M97)
*	4-076-931-01	TRAY (KV-EX34M97)
	4-392-003-11	BAND, HOLD
	4-065-210-01	JOINT
	4-392-004-11	CLIP

****

REMOTE COMMANDER
****

	1-476-291-11	REMOTE COMMANDER (RM-963)
		(KV-EX29M39/M87/M97)
	1-476-292-11	REMOTE COMMANDER (RM-964)
		(KV-EX29M65/M93)
	4-079-833-01	BATTERY COVER, REMOTE COMMANDER
		(RM-963)
	9-933-895-11	BATTERY COVER, REMOTE COMMANDER
		(RM-964)

9-872-218-01

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